Management Chapter Members' Perspectives On Professional Issues, 2002

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Background and Objectives

More than 3,000 ASRT members belong to the Management Chapter. This figure represents about 3% of the total ASRT membership and about 9% of all ARRT-registered radiologic technologists who hold managerial/administrative titles. As of spring 2002, however, little hard data existed as to what attracts these members to ASRT and the Management Chapter rather than or in addition to their membership in other radiology management societies. Nor did the ASRT have a definite picture of these members with respect to their professional background and current positions.

A primary purpose of the survey was to establish the professional profile of ASRT Management Chapter members. The survey also collected data concerning services and benefits Management Chapter members obtain from ASRT and other professional societies that seem most relevant to their role as managers. Results associated with this objective are reported in *Management Chapter Survey, 2002 (Internal Report).*

The ASRT also used this opportunity to obtain managers' perspectives on a number of current radiologic sciences issues, such as technologists' access to the Web and the cost/benefit ratio for local and traveling temporary workers. The survey included several such questions; this report focuses on responses to those questions.

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Methodology

In mid-October 2002, a questionnaire was mailed 3,026 individuals recorded in ASRT records as members of the Management Chapter. By mid-December 2003, 670 questionnaires had been returned for a return rate of 22%.

Surprisingly, 15% of the respondents reported that they never have been members of the Management Chapter. However, a review of the records revealed that about 12% of those individuals sent questionnaires (i.e., ASRT members carried on the rolls as members of the Management Chapter) never requested chapter membership. It appears that those members were assigned to the management chapter based on their job title when the chapter system was instituted at ASRT in the mid-1990s. Therefore, there is an unintentional subsample of 103 individuals whose job titles suggested that Management Chapter membership was appropriate, but who never actively requested membership in the chapter.

Because the survey was mailed to the entire Management Chapter, the distribution underlying sample proportions and percentages is actually a hypergeometric distribution, rather than a binomial distribution. The standard errors and confidence intervals for the various measures are smaller than they would be had only a small fraction of the population been sampled by a factor of $\sqrt{\frac{N-n}{N-1}} = \sqrt{\frac{3026-670}{3025}} = .8825$. Overall percentages in the 40% to 60% range are thus estimated (at the 95% level of confidence) to within ± 3.4% and those at 10% and less or greater than 90% to within ± 1.0%.

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Executive Summary

Professional Profile

The job title of the modal survey respondent was director or manager of radiation or imaging services (or a comparable designation). However, all levels of administration from senior staff technologist to vice president were represented.

Given that 90 respondents provided 84 different "other" job titles, there does not appear to be a strong consensus on appropriate job titles for managers in the radiologic sciences.

The modal respondent listed six responsibilities, with 84% to 87% having responsibility for disciplinary actions, hiring and purchasing decisions; 65% to74% were responsible for creating capital and operating budgets and scheduling staff.

Nearly 70% of these managers worked in a hospital setting, 10% in private physician practices and 9% in clinics.

The average Management Chapter member has held a managerial position in the radiologic sciences for 13.8 years out of a total of 22.1 years in the profession. The average respondent has been in his or her current position for 5.6 years or about 40% of his or her total career as a radiologic sciences manager. The average Management Chapter member has been an ASRT member for 11 years — less than half as long as he or she has worked in the radiologic sciences and almost three years less than his or her tenure as a manager.

These managers supervise from zero to more than 100 people (radiologic technologists and others), with about half supervising 28 or fewer people. Substantial majorities of managers supervise radiographers, mammographers and computed tomography (CT) specialists. About half supervise nuclear medicine technologists and magnetic resonance (MR) specialists; only about an eighth supervise radiation therapists. More than half mentioned specialties other than the six on the checklist provided. Of 89 respondents specifying other specialties, more than 60% mentioned ultrasound, either alone or in combination with other specialties.

Perspectives on Current Professional Issues

Policies concerning staff technologist access to online continuing education (CE) varied considerably. Forty percent of the Management Chapter members reported that their staff technologists may obtain their CE online using workplace computers and count the time as on-job time. However, 39% said that staff technologists may not obtain CE online at the workplace, and another 17% reported that technologists may access online CE at the workplace but must count the time as break time, personal time or unpaid leave.

More than half (53%) of Management Chapter members indicated that staff technologists may use computers within their departments for online CE, with 8% saying that the technologists may use the same workstations used for performing procedures. A further 16% of respondents indicated that computers were available for CE purposes but outside the imaging or radiation therapy department.

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Twenty-nine percent of Management Chapter members indicated that their staff technologists may not use the Internet for purposes other than CE. Of these managers, 22% reported that non-CE Internet use must be clearly related to the technologist's job. For 24% of survey respondents, the range of permissible use also included educational purposes and for another 9%, professional development. Finally, about an eighth of these managers said that Internet use for any purpose is "tolerated or encouraged as long as it doesn't interfere with performance of the technologist's duties."

Attitudes towards applications training were generally positive. Substantial majorities of managers agreed with the statements, "Applications training is one of the most important kinds of continuing education; its value should be recognized by the granting of CE credits" and "Technologists in my department would be up in arms if I (or the ARRT) were to discontinue … CE credit for on-the-job applications training." Sizeable majorities disagreed with the statements that "Granting CE credit for on-the-job applications training adversely affects staff morale" and "The granting of CE credit for on-the-job applications training should be discontinued." The only negative indicator was that 42.5% of Management Chapter members agreed with the statement, "Many of the technologists awarded CE credits for on-the-job applications training have not been able to attend the full training session(s)."

Slightly more than half of the facilities where these Management Chapter members work employed R.T. aides, although these employees may not be called by that term. A large majority (80%) of these facilities train R.T. aides on the job (OJT). Most (64%) of the facilities using OJT entrust training to the technologist to whom a given R.T. aide is assigned. Fewer than 3% of managers reported relying on academic programs to train R.T. aides. Among the 13% of facilities that use an on-site program for R.T. aide training, the length of that program varied from half a day to 90 days, with the median length being 8 days.

More than a third of these Management Chapter members reported that they never employ temporary technologists. Another 47% indicated that they hire short-term staff only "as a temporary expedient until permanent staff can be hired." Nineteen percent of managers surveyed said that they use temporary workers to fill in for permanent staff who are on leave.

Almost 80% of respondents reported that they pay local temps (those "who reside in the local area and commute from their homes to their temporary assignments") more than they do permanent technologists, and only about 1% said that they pay local temps less. About half of the managers estimated that local temps receive at least 25% higher salary/wages than do the permanent technologists in their departments. Taking into account factors such as health insurance and other benefits, 61% of these managers believed that overall compensation for local temps is higher than for permanent technologists, 6% believed that overall compensation is lower and about a third thought that total compensation is about the same for local temps as for permanent staff, all things considered.

Differentials in pay and other benefits between traveling temporary technologists and permanent technologists appear to be even greater than those between local temps and permanent technologists. In particular, 92% of respondents reported that total compensation to traveling technologists is higher than for permanent staff; less than 1% of managers indicated that

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compensation is lower for travelers than for permanent staff; and 8% of those surveyed thought that total compensation is roughly equivalent, all things considered. However, a number of Management Chapter members cautioned in written comments that the pay and other benefits actually received by traveling temps should be distinguished from the much higher amounts paid to temporary staffing agencies.

The vast majority (92%) of managers considered hiring a permanent technologist to be much more cost effective than hiring a traveling temp; another 6% considered the permanent technologist somewhat more cost effective.

Several (102) Management Chapter members added comments on the above issues or on other aspects of their managerial roles, and 56 wrote comments beside particular questions on the survey.

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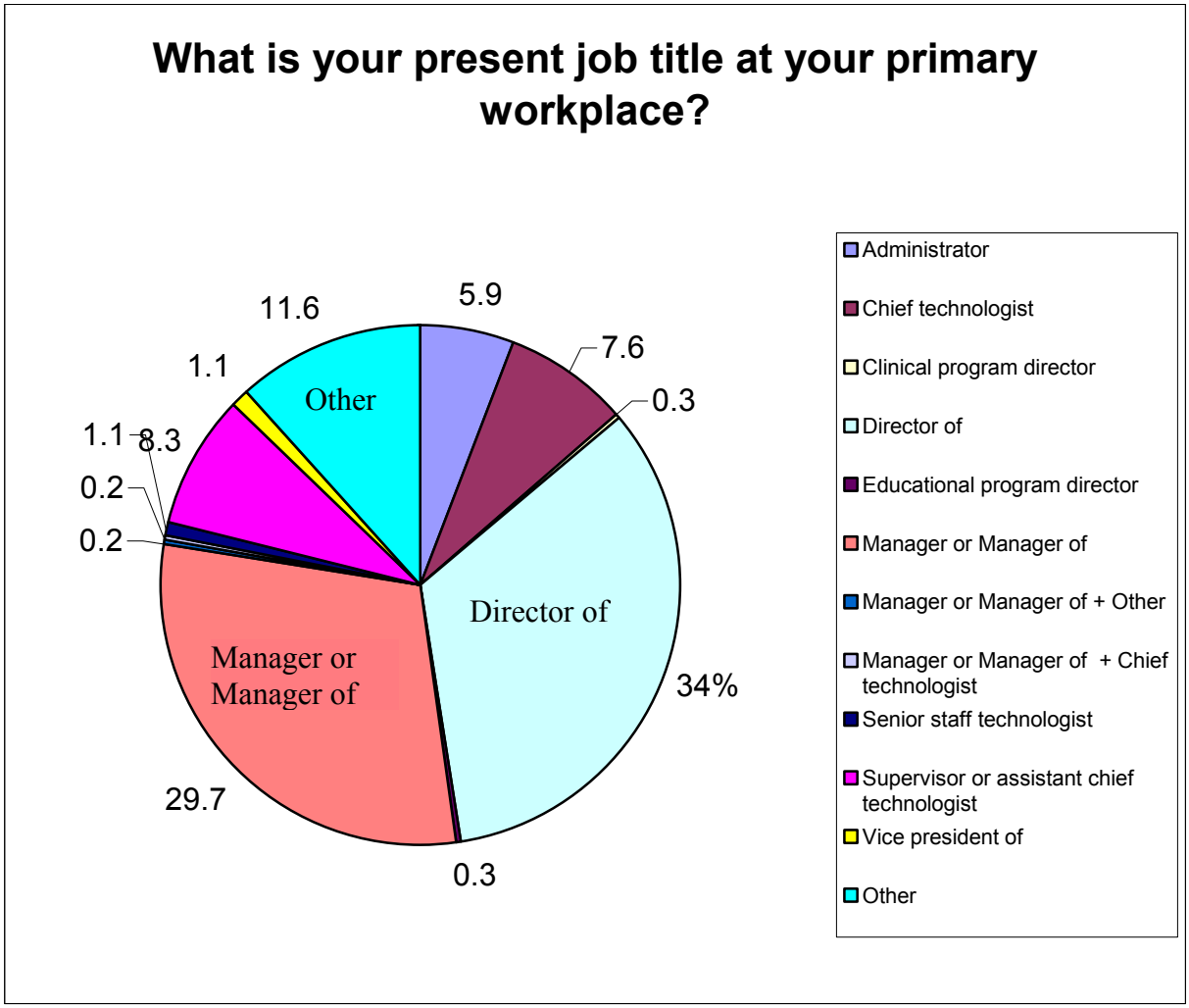
Illustrated Narrative

Professional Profile

The job title of the modal survey respondent was director of (33.8%) or manager of (29.7%) radiation or imaging services (or a comparable designation). However, all levels of administration from senior staff technologist to vice president were represented. Write-in responses for job title in the "other" category included positions such as staff technologist and CEO. Fewer than 1% of the respondents were directors of clinical or educational programs and about 1% were staff technologists.



The modal respondent listed six responsibilities, with 84% to87% having responsibility for disciplinary actions, hiring, and purchasing decisions: 65% to 74% were responsible for creating the capital and operating budgets and for scheduling staff. In addition, 204 (30%) of these managers mentioned 189 responsibilities other than or in addition to the six listed in the survey.

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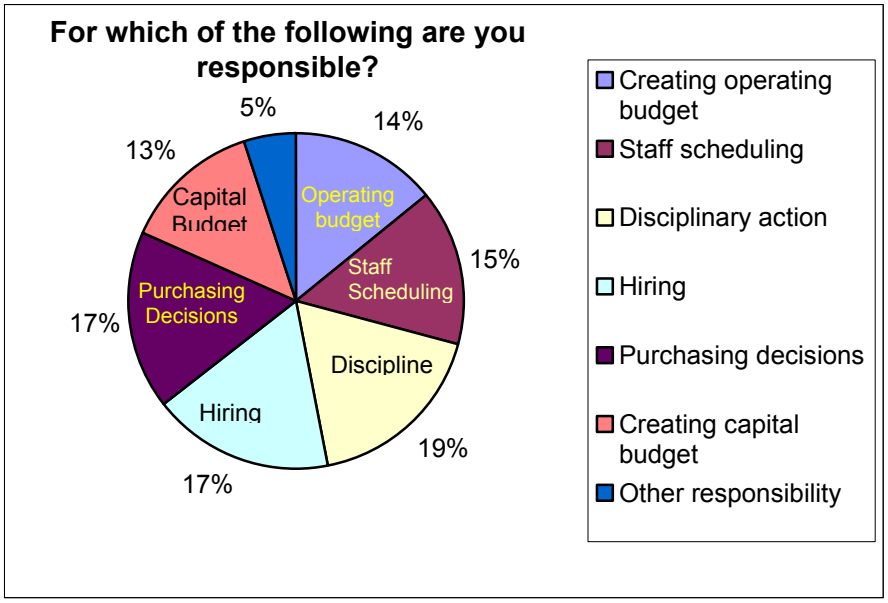
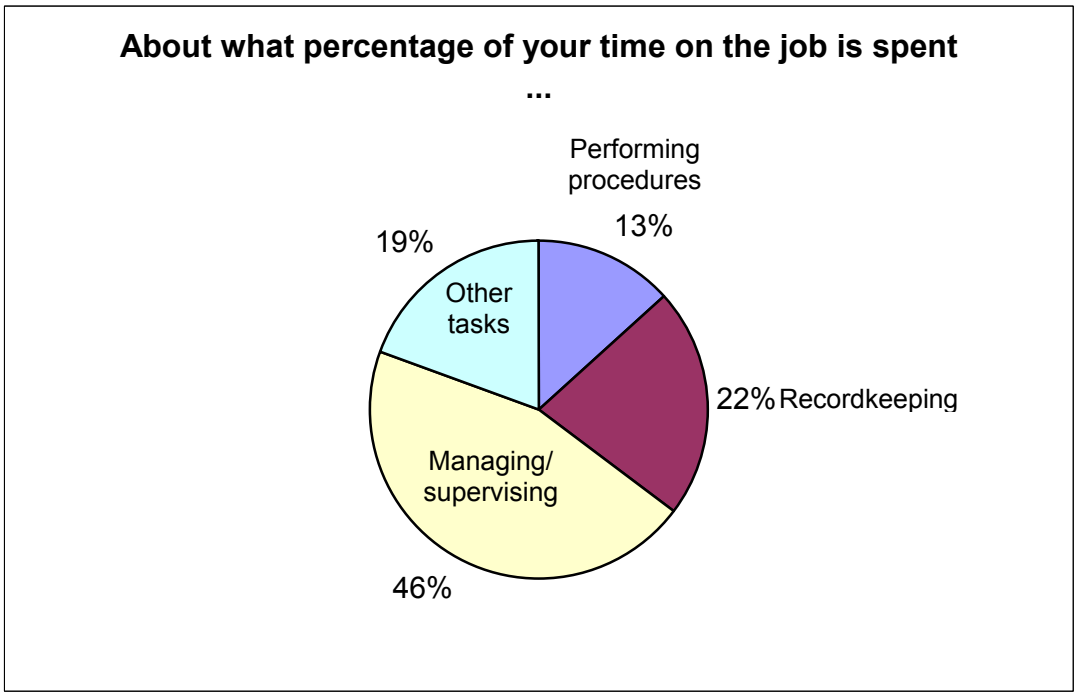


More than half (54%) of respondents spend at least some of their on-job time "performing imaging or radiation therapy procedures." Of those who do, most (72%) spend only a quarter of their time or less performing procedures, with an overall median of 1% and a mean of 13%. Close to half of the respondents' time (46%, on average) is spent managing/supervising those who perform procedures.



Nearly 70% of managers surveyed work in a hospital setting, 10% in private physician practices and 9% in clinics.

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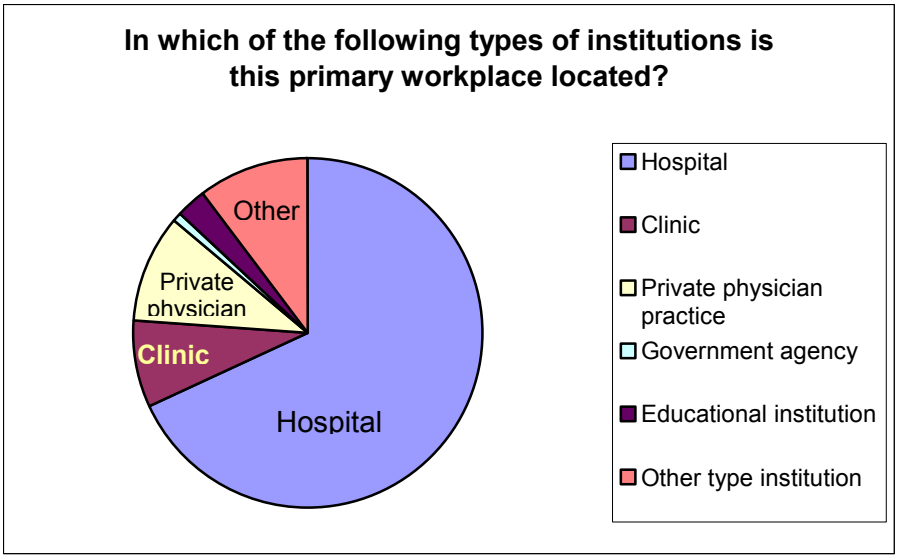
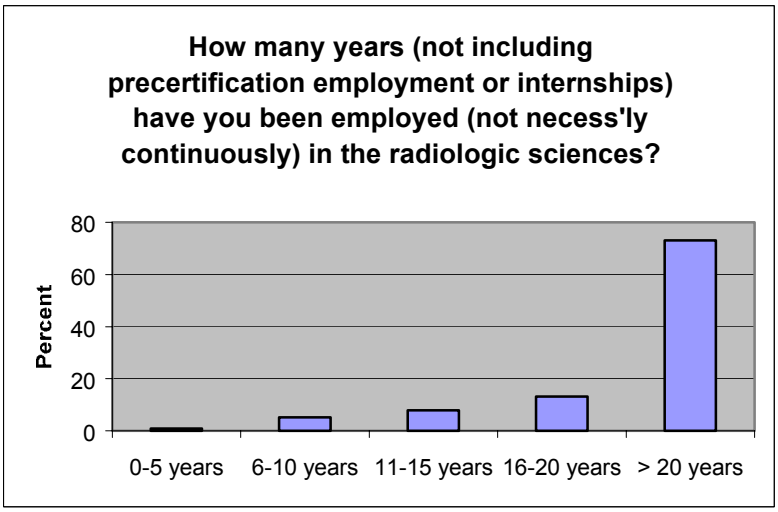


Management Chapter members work in institutions that vary greatly in size from zero to 3,000 beds, from 35 to 100,000 exams performed per month and from 1 to 5,000 employees. For a given measure, the median size was 238 beds or 2,130 exams per month or 45.3 employees.

Almost three-quarters of Management Chapter members have been employed in the radiologic sciences for more than 20 years, with the mean time in the profession being 22.1 years and with half of the respondents working in the radiologic sciences for 23.1 years or more.



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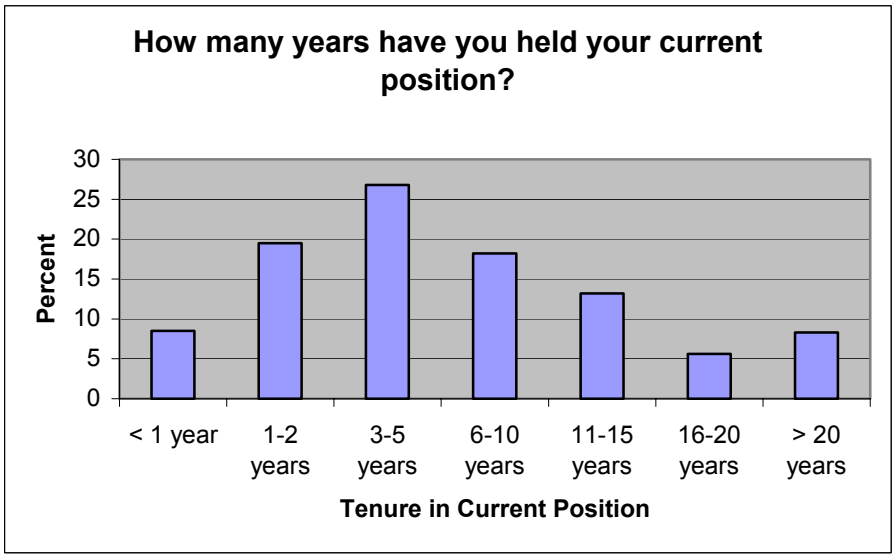

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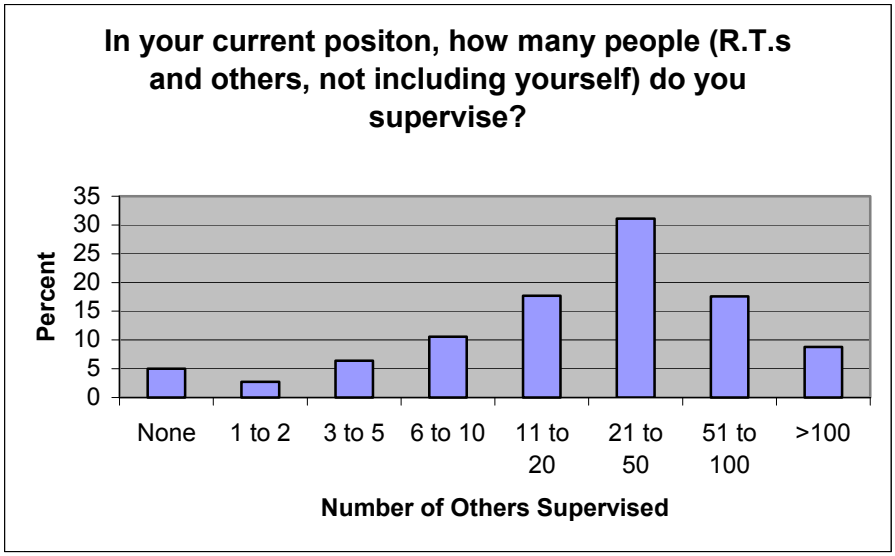

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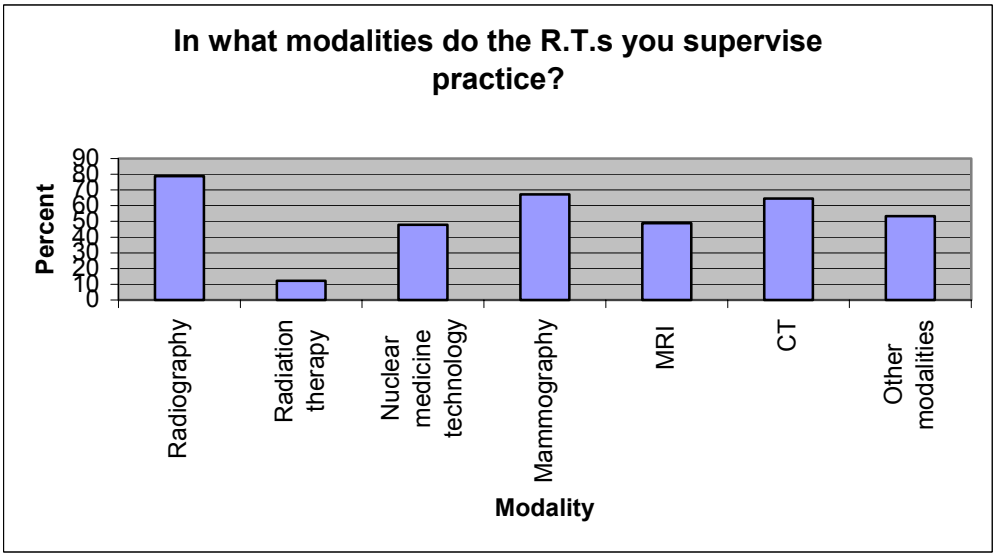

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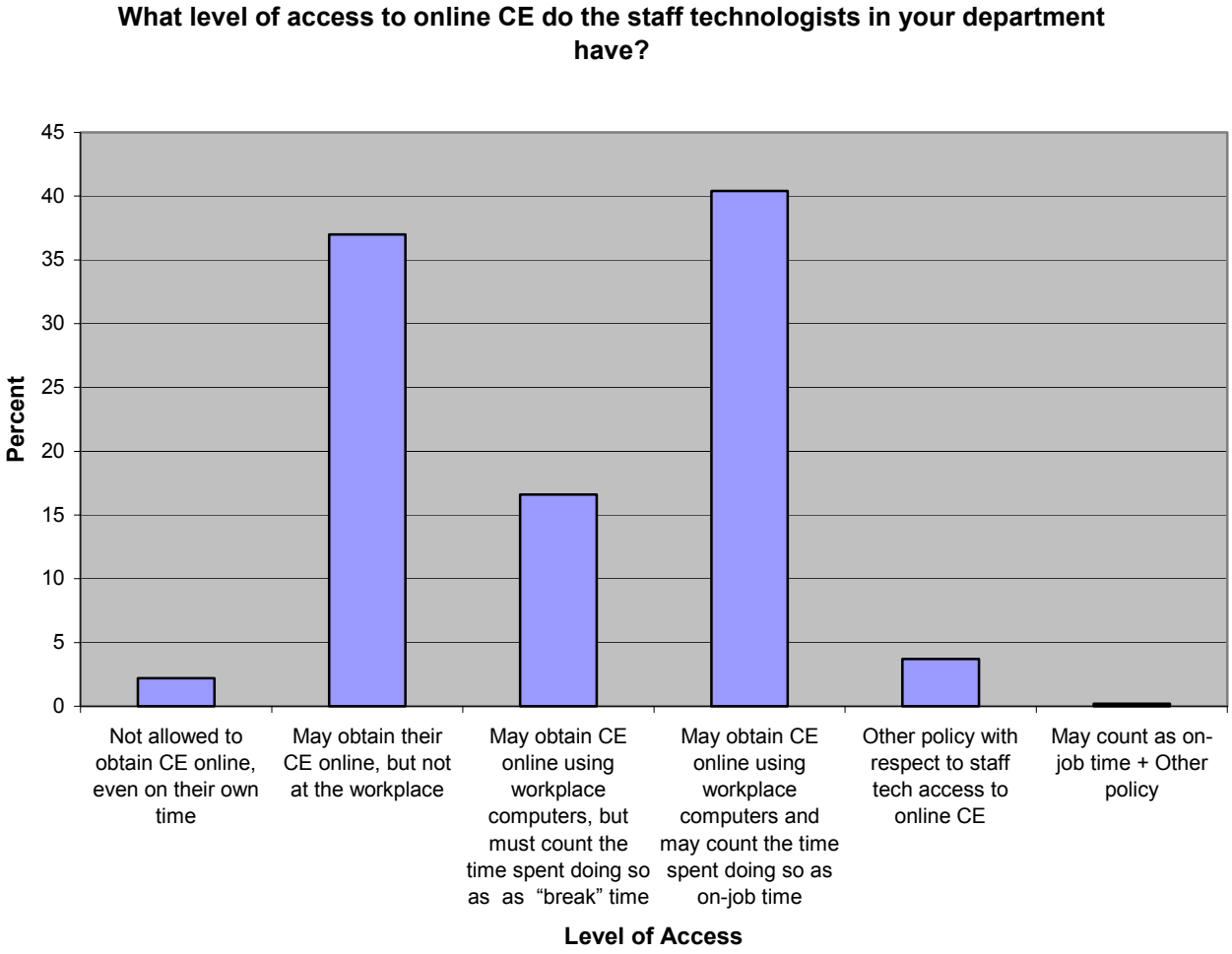

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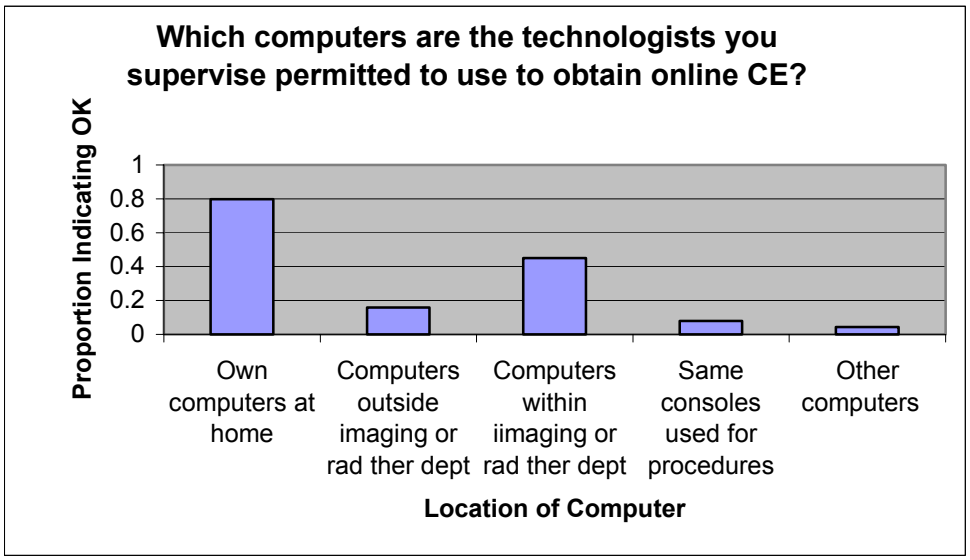

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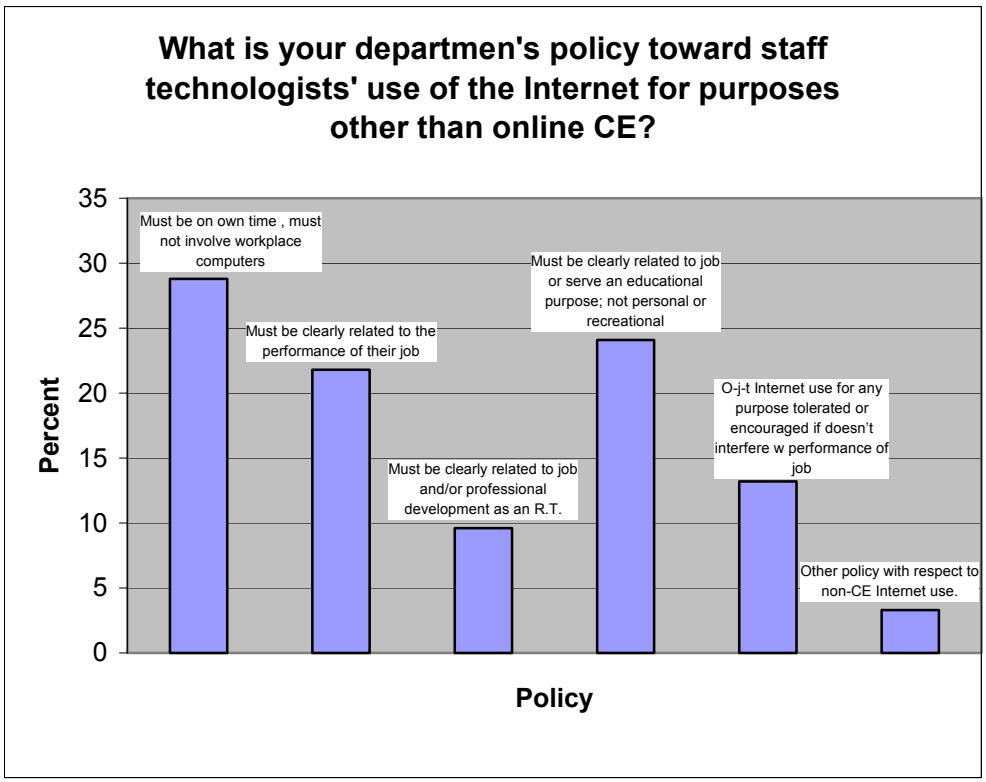

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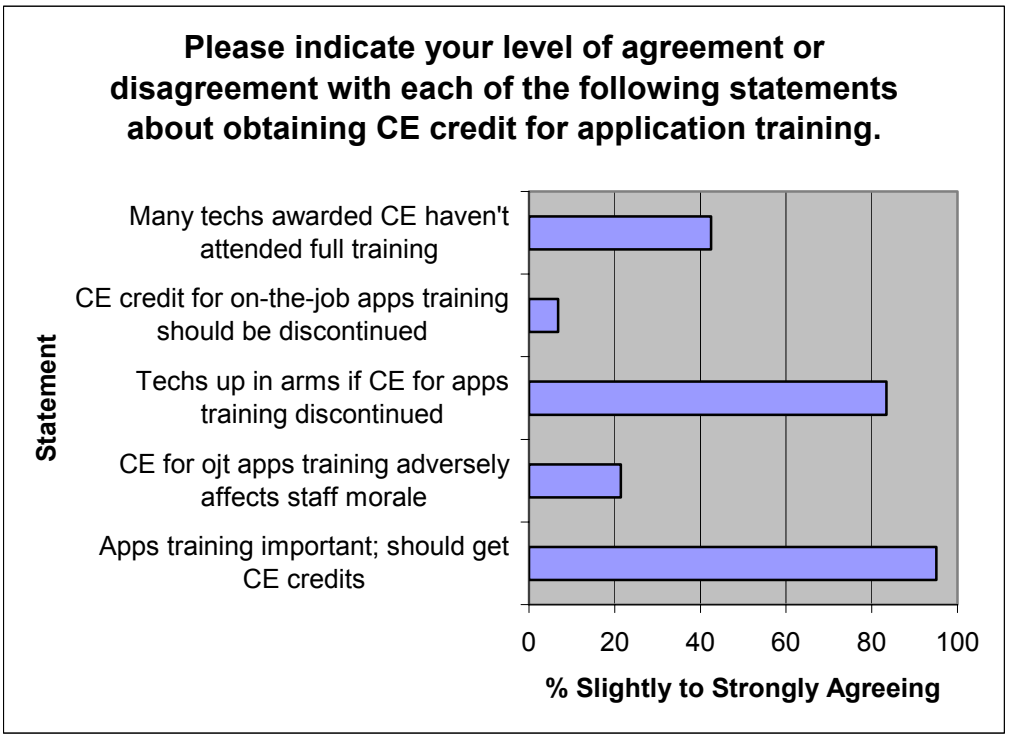
Attitudes towards applications training were generally positive. Substantial majorities of managers agreed with the statements, "Applications training is one of the most important kinds of continuing education; its value should be recognized by the granting of CE credits" and "Technologists in my department would be up in arms if I (or the ARRT) were to discontinue … CE credit for on-the-job applications training." Sizeable majorities disagreed with the statements that "Granting CE credit for on-the-job applications training adversely affects staff morale" and "The granting of CE credit for on-the-job applications training should be discontinued." The only negative indicator was that 42.5% of Management Chapter members agreed with the statement, "Many of the technologists awarded CE credits for on-the-job applications training have not been able to attend the full training session(s)."



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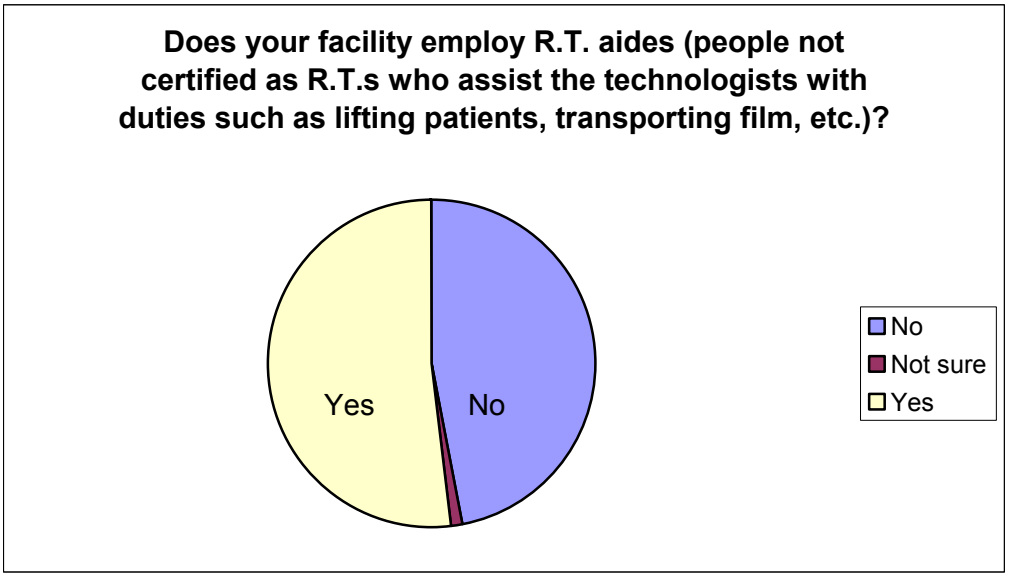
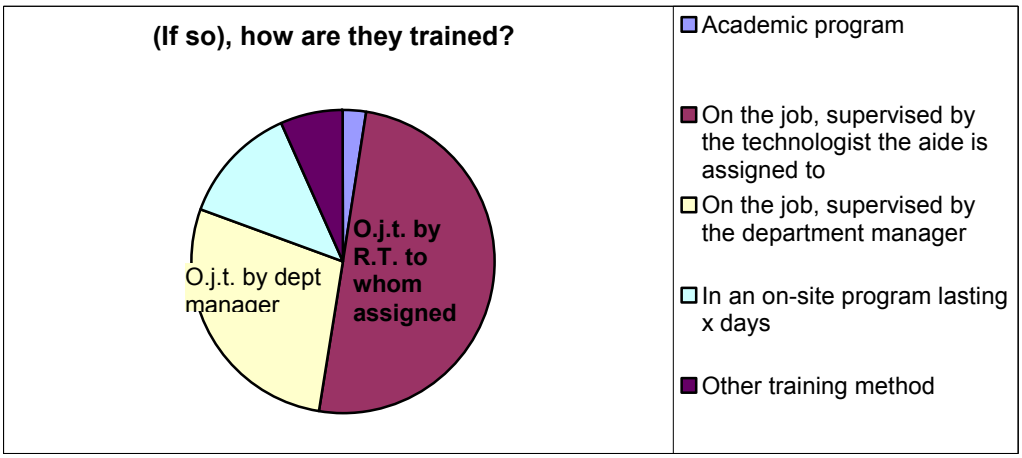


A large majority (80%) of these facilities train R.T. aides on the job (OJT). Most (64%) of the facilities using OJT entrust training to the technologist to whom a given R.T. aide is assigned. Fewer than 3% of managers reported relying on academic programs to train R.T. aides. Among the 13% of facilities that use an on-site program for R.T. aide training, the length of that program varied from half a day to 90 days, with the median length being 8 days.



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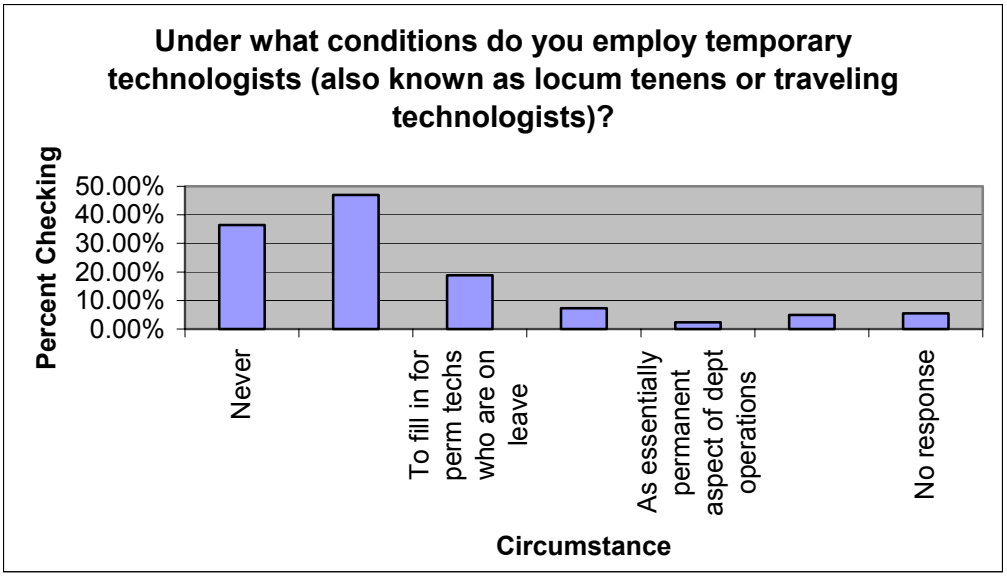
More than a third of these Management Chapter members reported that they never employ temporary technologists. Another 47% indicated that they hire short-term staff only "as a temporary expedient until permanent staff can be hired." Nineteen percent of managers surveyed said that they use temporary workers to fill in for permanent staff who are on leave.



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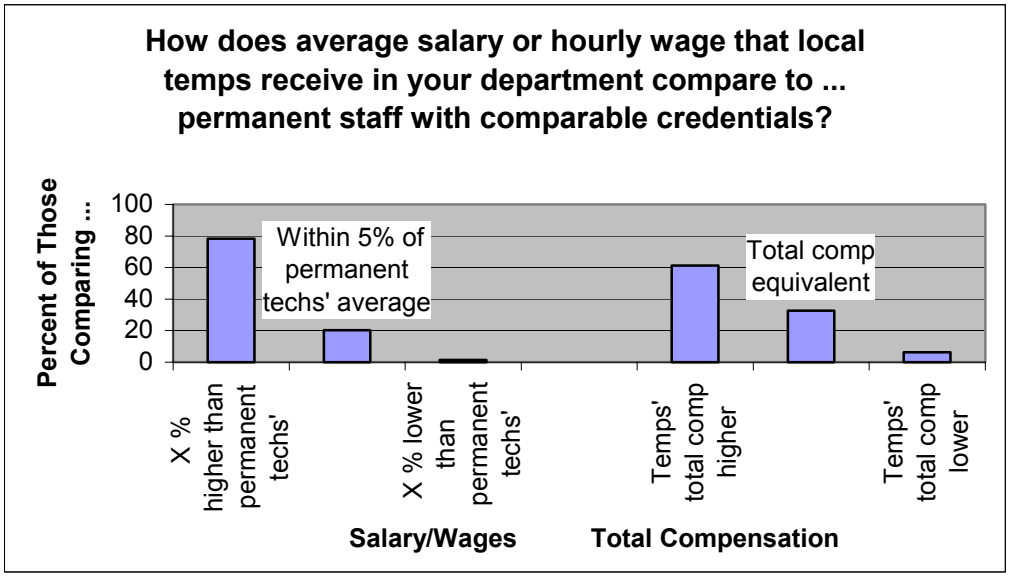
Almost 80% of respondents report that they pay local temps (those "who reside in the local area and commute from their homes to their temporary assignments") more than they do permanent technologists; only about 1% say they pay local temps less, with the net result that about half of the managers estimate that local temps receive at least 25% higher salary/wages than do the permanent technologists in their department. Taking into account "such factors as health insurance and other benefits", 61% of these managers feel that local temps' overall compensation is higher than permanent techs'; 6%, lower; and about a third believe that total compensation comes out about the same for local temps as for permanent techs, all things considered.



Note: Mean amount by which respondents judged local temps' salary/wages higher than permanent technologists' salary/wages = 37.8%; median = 24.8%.

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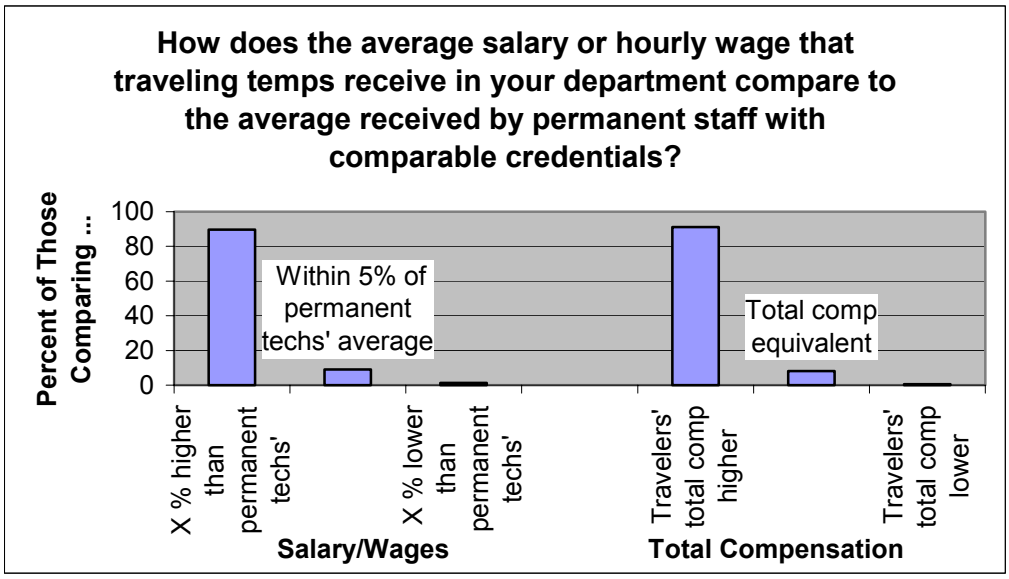
Not surprisingly, the contrast between traveling temporary technologists (those "who reside outside the local area and must find temporary housing in the area where their temporary-assignment facility is located for the duration of that assignment") and permanent staff is even stronger. Ninety percent of mangers indicated that traveling temps receive higher salary and/or wages vs. only 1% of respondents who report that their departments pay travelers less than permanent staff. According to those surveyed, the median amount by which traveling temps' pay exceeds permanent techs' pay is 42%. Further, consideration of "such factors as temporary housing costs, per diem, health insurance and other benefits" makes the traveler/permanent comparison slightly *more* favorable to traveling temps. In particular, 92% of respondents reported that total compensation to traveling technologists is higher than for permanent staff; less than 1% of managers indicated that compensation is lower for travelers than for permanent staff; and 8% of those surveyed thought that total compensation is roughly equivalent, all things considered.

However, a number of Management Chapter members cautioned in written comments that the pay and other benefits actually received by traveling temps should be distinguished from the much higher amounts paid to temporary staffing agencies.



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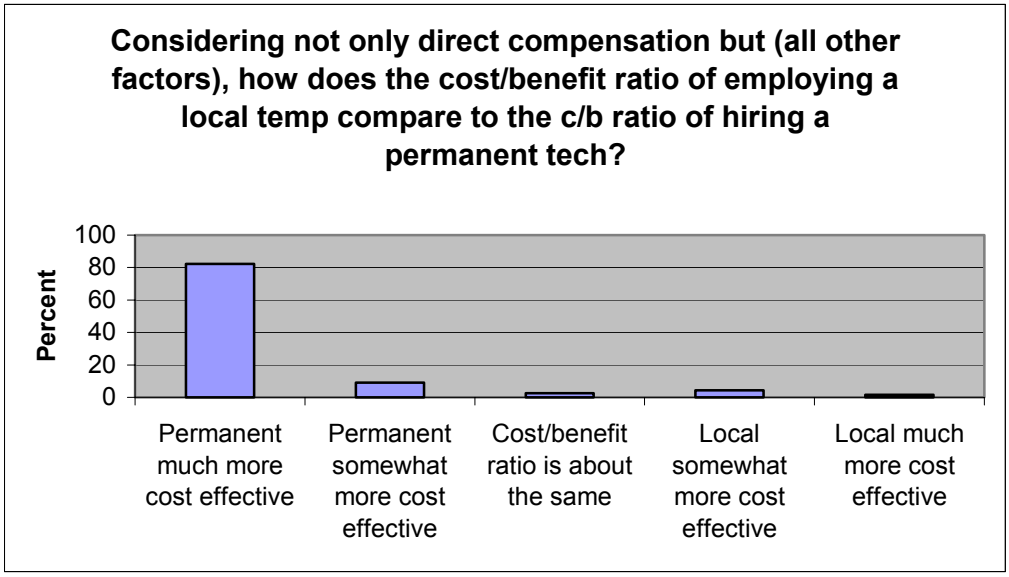
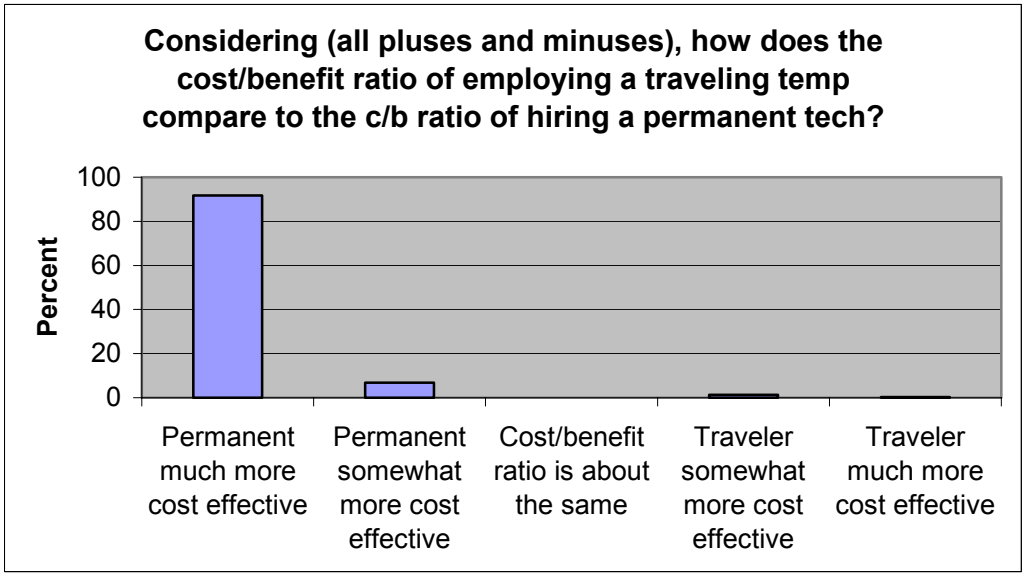
More than 80% of Management Chapter members considered hiring a permanent technologist to be much more cost effective than hiring a local temp, all things (eg, health insurance, retirement, relative productivity, impact on morale, training time and cost,etc.) considered. Another 9% considered permanent staff somewhat more cost effective than local temps.



The vast majority (92%) of managers considered hiring a permanent technologist to be much more cost effective than hiring a traveling temp; another 6% considered the permanent technologist somewhat more cost effective.



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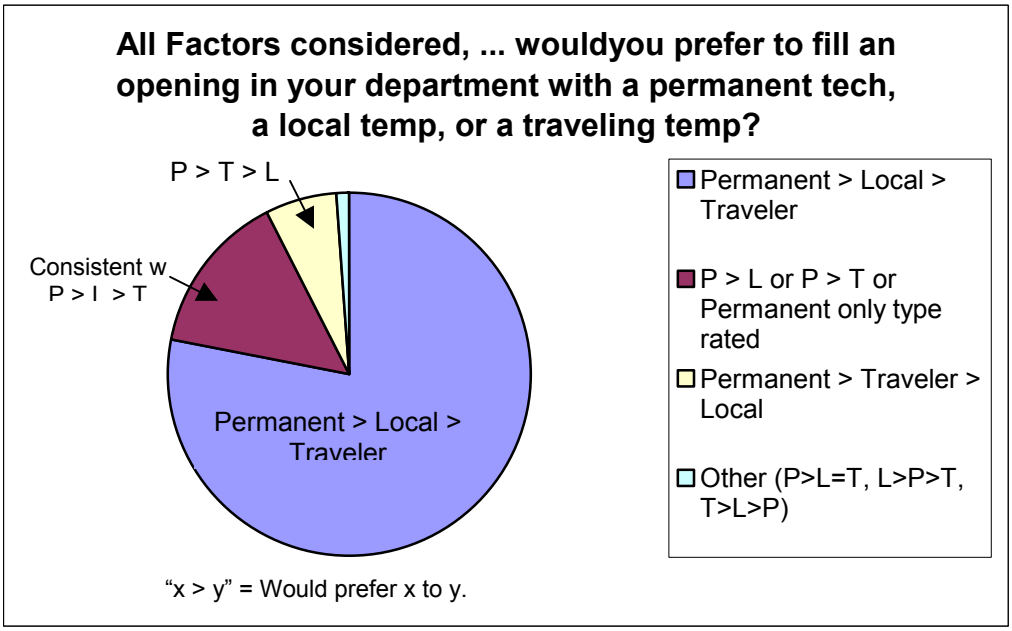
More than three-fourths of Management Chapter members preferred hiring a permanent technologist, their second preference was to employ a local temp and they would hire a traveling temp only if they were not able to hire one of the other two types. An additional 14% of managers expressed a preference for a permanent technologist over one of the other two but did not mention the third type; 6% of respondents gave first preference to hiring a permanent technologist, but preferred travelers to local temps.



Several (102) Management Chapter members added comments on the above issues or on other aspects of their managerial roles, and 56 wrote comments beside particular questions on the survey.

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Detailed Results

Professional Profile

Question: What is your present job title at your primary workplace?

Job Description at Current Workplace

	Frequency	Valid Percent
Administrator	37	5.9
Chief technologist	48	7.6
Clinical program director	2	0.3
Director of x	212	33.8
Educational program director	2	0.3
Manager or Manager of x	187	29.7
Manager or Manager of + Other	1	0.2
Manager or Manager of + Chief technologist	1	0.2
Senior staff technologist	7	1.1
Supervisor or assistant chief technologist	52	8.3
Vice president of x	7	1.1
Other	73	11.6
Total valid	629	100.0
Missing	41	6.1
Total	670	

Respondent is VP of:

	Frequency	Valid Percent
Ancillary services	1	12.5
Corp	1	12.5
Corporations/operations	1	12.5
Diagnostics & therapeutics	1	12.5
[Name of Co.] Radiology Associates	1	12.5
Practice administration	1	12.5
Professional services	1	12.5
Technology	1	12.5
Total valid	8	
Missing	662	98.8
Total	670	100.0

Respondent is Manager of:

	Frequency	Percent
Breast center	1	0.7
Breast imaging	1	0.7
Breast img/outpt radiology	1	0.7
Cardiac Cath Lab	1	0.7
Cardiovascular Clinical Education	1	0.7
Cat scan, mammo, file room	1	0.7
Clinic - radiology	1	0.7
Coding, compliance, reimbursement	1	0.7
CT scanning dept	1	0.7
D.I. dept	1	0.7
Diagnostic & Angiography Radiology	1	0.7
Diagnostic & therapeutics lab, x-ray, pharmac	1	0.7
Diagnostic Imaging	11	7.7

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Diagnostic operations	1	0.7
Diagnostic radiology	2	1.4
Diagnostic service	1	0.7
Emergency department	1	0.7
Facility manager	1	0.7
Family practice physician office	1	0.7
Free-standing imaging center	1	0.7
Group practice	1	0.7
Hospital-affiliated imaging center	1	0.7
Hospital-owned free standing clinic	1	0.7
Imaging & ultrasound	1	0.7
Imaging, imaging center, imaging department, imaging services	12	8.4
Mammography & bone density center	1	0.7
Marketing	1	0.7
Medical imaging, medical imaging dept	7	4.9
Medical imaging & lab	1	0.7
Medical imaging & cardiopulmonary ser	1	0.7
MRI dept, division, operations	3	2.1
MRI, BDU, diagnostic center	1	0.7
Nuc med, nuc cardiology, us	1	0.7
Operations	4	2.8
Outpatient imaging center	1	0.7
Outpatient radiology/operation	1	0.7
Outpatient Services	1	0.7
Patient care/operations	1	0.7
Practice mgr for radiology	1	0.7
Product manager	1	0.7
	1	0.7
QA/QC		
Quality assurance	2	1.4
Radiation oncology	10	7.0
Radiation therapy	2	1.4
Radiation therapy	1	0.7
Radiology, Radiology Services, Radiology Dept., etc.	36	25.2
Radiology information	1	0.7
Radiology information systems	1	0.7
Radiology/CT	1	0.7
Radiology/mammography	1	0.7
Radiology/PACS Adm.	1	0.7
Retired	1	0.7
RIS	2	1.4
Satellite site	1	0.7
[Name of] Occupational Medical Clinic	1	0.7
Special imaging	1	0.7
Technical services	1	0.7
Unit manager for MRI mobile	1	0.7
Urgent care office	1	0.7
Vascular radiology	1	0.7
Women's health	1	0.7
Total non-missing	143	100.0
Missing	527	78.7
Total	670	100.0

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Respondent is Director of:

	Frequency	Valid Percent
Administration	1	0.4
Administrative director	2	0.9
Ancillary services	1	0.4
Cancer care institute	1	0.4
Cancer center	1	0.4
Cardiac cath lab/ep/angio	1	0.4
Cardiac cath/angio lab	1	0.4
Cardiovascular lab	1	0.4
Career services - radiation therapy	1	0.4
Clinical	1	0.4
Clinical operations	1	0.4
Clinical services	1	0.4
Diagnostic & therapeutic services	1	0.4
Diagnostic imaging, diagnostic imaging services	24	10.6
Diagnostic imaging & cardiovascular services	1	0.4
Diagnostic imaging (radiology & nuc med)	1	0.4
Diagnostic radiology	1	0.4
Diagnostic services	5	2.2
Imaging, imaging center, imaging services	47	20.8
Imaging & theraputic services	1	0.4
Imaging and diagnostic	1	0.4
Imaging cra	1	0.4
Imaging radiation oncology gamma knife	1	0.4
Imaging services/cath lab	1	0.4
Intl long distance [name of company]	1	0.4
Invasive imaging/cardiovascular services	1	0.4
Med imaging & rehab	1	0.4
Medical dosimetry services	1	0.4
Medical imaging, medical imaging dept.	13	5.8
Mobile MRI services	1	0.4
Oncology services	1	0.4
Operations	5	2.2
Operations & marketing	1	0.4
Planning & implemention	1	0.4
Rad onc & Gamma Knife	1	0.4
Radiation Management [California county]	1	0.4
Radiation Onc, Med.	1	0.4
Radiation oncology	3	1.3
Radiation services	1	0.4
Radiological sciences	1	0.4
Radiology-imaging	1	0.4
Radiology, radiology division, radiology services	74	32.7
Radiology & imaging	3	1.3
Radiology & nuc med	1	0.4
Radiology & radiation oncology	1	0.4
Radiology & radiation therapy	1	0.4
Radiology & rehabilitation services	1	0.4
Radiology imaging services	1	0.4
Radiology, cardiology & radiation oncology	1	0.4
Radiology, out patient imaging	1	0.4
Radiology/cardiology	1	0.4
Radiology/diagnostic cardiology	1	0.4
Radiology/information	1	0.4
Radiology/nuc medicine	1	0.4

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Radiology/rad oncology	1	0.4
Sr. Director of Diagnostic Services (Radiology-Cardiology-Neurology)	1	0.4
Technical services - radiation oncology	1	0.4
X-ray/imaging	1	0.4
Total non-missing	226	100.0
Missing	444	66.3
Total	670	

The job title of the modal survey respondent was director of (33.8%) or manager of (29.7%) radiation or imaging services (or a comparable designation). However, all levels of administration from senior staff technologist to vice president were represented. Write-in responses for job title in the "other" category included positions such as staff technologist and CEO. Fewer than 1% of the respondents were directors of clinical or educational programs and about 1% were staff technologists.

Question: For which of the following are you responsible? Check all that apply.

Descriptive Statistics

Responsibility	N	Proportion checking this responsibility
Creating operating budget	670	.6851
Staff scheduling	670	.7433
Disciplinary action	670	.8657
Hiring	670	.8522
Purchasing decisions	670	.8388
Creating capital budget	670	.6507
Other responsibility	670	.2433
Valid N (listwise)	670	

Number of Responsibilities Checked

	Frequency	Percent	Cumulative Percent
.00	20	3.0	3.0
1.00	32	4.8	7.8
2.00	24	3.6	11.3
3.00	38	5.7	17.0
4.00	94	14.0	31.0
5.00	136	20.3	51.3
6.00	263	39.3	90.6
7.00	63	9.4	100.0
Total	670	100.0	

Mean = 4.88; Std. Deviation = 1.72; Median = 4.94

The modal respondent listed six responsibilities (mean and median ≅ five responsibilities), with 84% to 87% having responsibility for disciplinary actions, hiring, and purchasing decisions: 65% to 74% were responsible for creating the capital and operating budgets and for scheduling staff. In addition, 204 (30%) of these managers mentioned 189 responsibilities other than or in addition to the six listed in the survey.

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Other Responsibilities Specified

Responsibility	Frequency	Valid Percent
Missing	466	69.6
10% planning, 10% intrafacility interaction, 10% providing CE, 40% putting out fires	1	.1
2 hospitals	1	.1
A/p payroll maintenance	1	.1
A/p, x-ray, lab, medical asst - all administration related jobs-credentialing phy w/health ins plans -- Primary care office with multispecialties.	1	.1
Accreditation compliance with state and JCAHO	1	.1
Administer treatment as needed	1	.1
All above	1	.1
All accounts and accts payable/receivable	1	.1
All aspects of student learning all techs CEs remain up to date & educat	1	.1
All employee evals, pt relations, marketing	1	.1
All finance, marketing	1	.1
All members of dept/evaluation	1	.1
All modalities including, nuc med, ultrasound mammography CT angiography & general radiology	1	.1
All operational decisions	1	.1
All operations contract negotiations	1	.1
All quality issues, protocol regarding mammography	1	.1
Also work as working technologist daily	1	.1
Any decision related to coding compliance or billing	1	.1
Any other duties as assigned	1	.1
Assist personnel in applying to schools, retention & new geography locations	1	.1
Auditing pt billing	1	.1
Billing/coding	3	.4
Billing/collections/contracts	1	.1
Business development, business planning	1	.1
Chief technologist	1	.1
Clinical & technical support, develop educational promotional materials, market research, coding	1	.1
Clinical coordinator for radiography students	1	.1
Coaching staff, quality improvement, complaint resolution developing dept procedures	1	.1
Committee responsibilities q/i presentations	1	.1
Compliance	1	.1
Compliance & regulatory management	1	.1
Compliance and risk management	1	.1
Computer reports/process impro	1	.1
Computers	1	.1
Contract services, project management	1	.1
Contracts, new business opportunities	1	.1
Coordinating & assisting on pediatric patients in all 2 modalities	1	.1
Coordinating 4 hospitals, marketing gov't compliance	1	.1
Correspondence, procedure manuals, building mgmt, inventory	1	.1
Creating business/strategic plans	1	.1
Creating cancer care facilities	1	.1
Creating new product lines, process	1	.1

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Daily operation of outpatient imaging center/HR	1	.1
Daily operations	4	.5
Day-to-day operation of 6 depts (with supervisors in each area)	1	.1
Day to day operation of RAD dept, implementation of new RIS (pretty much everything except budget	1	.1
Departmental safety & QI initiatives	1	.1
Dept policy & protocol, compliance, HIPAA, billing coding	1	.1
Dept QA & QC; process improvement; pt education; equip management & service, safety issues; regulation compliance; etc.	1	.1
Development and training of all clinical staff	1	.1
Developing and implementing operating policies and protocols	1	.1
Developing education program	1	.1
Dosimetry	1	.1
Education-performance improvement	1	.1
Education	2	.3
Equipment maintenance and training	1	.1
Equipment selection/purchases, service contracts	1	.1
Equipment service contracts	1	.1
Establishing policy & procedure / maintaining QA	1	.1
Evaluations day to day operations	1	.1
Evaluations	1	.1
Everything	1	.1
Everything else	2	.3
Everything else reports through this office first	1	.1
Expansion or medical education	1	.1
Fbudgets, etc.	1	.1
Financial management, QM, bus development, marketing inventory management, new services, multiple facilities, customer satisfaction	1	.1
Forecasting, planning	1	.1
FTE budget	1	.1
Future planning for OP center	1	.1
Grants & contracts	1	.1
Hospital representative - works on facility projects	1	.1
HR, employee benefits, HIPAA compliance, state & federal regulatory	1	.1
Human Resource Dept	1	.1
Human Resources PACS administration	1	.1
I.S.; policies & procedures; privacy officer; HR	1	.1
Information services computer radiology	1	.1
Information systems	2	.3
Information systems, payroll	1	.1
Inspect for both capital & operating budgets	1	.1
Involved in purchasing decisions; involved in creating operating & capital budget in my 2 cost centers	1	.1
IOP - committees, all compliance	1	.1
IS system administrator	1	.1
IT issues in dept.	1	.1
IT, logistics	1	.1
JCAHO, PI, QC	1	.1
JCAHO, quality assessment, PI, credentials, incident reports	1	.1
JCAHO, radiology student programs, staff continuing education	1	.1
Labor mgmt, JCAHO, regulatory	1	.1
Leadership of diag services	1	.1
Leasing contracts with mobile companies	1	.1
Long term planning	1	.1

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Maintaining an operational budget and workflow in all imaging modalities	1	.1
Mammo-FDA-OSHA	1	.1
Mammo QA	1	.1
Mammo tracking sys application	1	.1
Mammography coordinator	1	.1
Management for cancer center	1	.1
Managing, recommending, electronic equip, train staff on using RIS, PAC, digital voice dictation sys	1	.1
Marketing	3	.4
Marketing services, new tech	1	.1
Marketing, business growth	1	.1
Marketing, policies, contracts	1	.1
Meetings	1	.1
MQSA documentation	1	.1
Multiple hospitals	1	.1
Not presently working	1	.1
Operation & staffing on entire department	1	.1
Operational budget	1	.1
Operational budget nm-us-ct	1	.1
Ordering supplies, floor supervision	1	.1
Out of management	1	.1
Oversee all support services, chair safety committee, electronic imaging committee	1	.1
Oversee cardiovascular product line	1	.1
Oversee day to day operations of x-ray dept and entire practice facility	1	.1
PACS administrator	1	.1
PACS, Dept construction	1	.1
PACS, HIPAA, equipment installation coordination	1	.1
PAS/RIS	1	.1
Payment of bills [a CEO-owner]	1	.1
Payroll, accounts payable	1	.1
Payroll; students; evaluations; daily dept inpatient & outpatient flow	1	.1
Perform mammo/x-ray/DEXA/QC for MQSA	1	.1
Performance appraisals, charge master	1	.1
Performance improvement	1	.1
Performance improvement, strategic planning	1	.1
Performance reviews, staff meetings	1	.1
Performing exams-routing & mammo, film file & computer work	1	.1
Performing procedures, scans	3	.4
Personnel budget	1	.1
Planning, business plans	1	.1
Policies and proc/maintenance	1	.1
Policy	1	.1
Policy & procedure/ HIPAA	1	.1
Policy/procedures, performance	1	.1
Policies & procedures, QA, accreditation, MD schedule, OSHA, Staff inservices	1	.1
PR & HIPAA privacy officer	1	.1
Prep for inspections, write policy & procedure	1	.1
Product development RIS system	1	.1
Protocol development	1	.1
Provide data for budgets	1	.1
QA/performance improvement/daily operations	1	.1

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QA/PI reporting, policy creation, also manage other areas-cardiology, resp ther, neurology	1	.1
QA/QI	1	.1
QC & QM	1	.1
QC/supply maintenance & ordering	1	.1
Quality assessment & charge capture review/coding review educational responsibilities	1	.1
Quality assurance	1	.1
Quality control, ordering supplies, equipment maint/repair	1	.1
Quality management	1	.1
Radiation monitor/dosimetry	1	.1
Radiologic training, licensure	1	.1
Report monthly revenue budgets to administrator; productivity stats; monthly procedure totals reports; numerous reports.	1	.1
Requesting capital items, project management (new services)	1	.1
Responsible for equipment operation, JCAHO record keeping	1	.1
Retired	1	.1
RIO-medical services	1	.1
RIS, coding, voice recognition reporting	1	.1
RSO, OSHA, MQSA, marketing	1	.1
Sales quotas	1	.1
Sales, account, management	1	.1
Satellite facility ops	1	.1
School affiliates contractors construction oversight	1	.1
Service planning	1	.1
Staff development; evaluation	1	.1
Strategic planning	3	.4
Strategic planning, marketing, technology assessment, performance improv	1	.1
Strategic planning, new program development, etc	1	.1
Strategic planning, operational development	1	.1
Supervise staff & patient flow	1	.1
Supervise tech & med records	1	.1
Supervising in our emergency dept	1	.1
Supervision of radiography students	1	.1
Surgery scheduling pt triage	1	.1
Teaching PACS/Web equipment	1	.1
Training managers regarding billing/coding & other fed reg	1	.1
Training QA	1	.1
Training scrub and circulating roles	1	.1
Training, recruiting, planning, QA, Information Services	1	.1
Ultimately responsible for all	1	.1
University hospital	1	.1
Very little	1	.1
Work orders, facility aspects; computer (HIS) software maintenance for radiology	1	.1
Working as staff tech	2	.3
Working in vir lab if necessary	1	.1
Writing bus case, recruitment	1	.1
Yearly evaluations, voice recognition, PACS implementation, RIS	1	.1
Total	670	100.0

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Question: About what percent of your time on the job is spent: performing imaging/radiation therapy procedures? Record keeping? Managing/supervising those who perform imaging/radiation therapy procedures? Other (please specify).

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
% time on job performing ... procedures	552	0	99	15.48	23.220
% time on job performing recordkeeping	585	0	100	24.74	18.390
% time mng/superv those who do procedures	612	0	100	47.76	27.429
% time on other tasks	324	0	100	36.92	28.177
Sum of %'s	647	.00	250.00	99.2349	17.99838
Valid N (listwise)	260				

Note: Mean percentages do not add up to 100% because some (5.6%) respondents' entries did not add up to 100%; this was probably intentional in most cases.

More than half (54%) of respondents spend at least some of their on-job time "performing imaging or radiation therapy procedures." Of those who do, most (72%) spend only a quarter of their time or less performing procedures, with an overall median of 1% and a mean of 13%. Close to half of the respondents' time (46%, on average) is spent managing/supervising those who perform procedures.

Descriptive Statistics

Type of Institution in Which Primary Workplace Located	Proportion listing as primary workplace
Hospital	.6955
Clinic	.0851
Private physician practice	.1000
Government agency	.0104
Educational institution	.0284
Other type institution	.1045
Valid N (listwise)	670

Note: Proportions add up to slightly more than 1.00 because a few respondents listed multiple types of institution.

Nearly 70% of these managers work in a hospital setting, 10% in private physician practices and 9% in clinics.

Question: How large is the institution where you work?

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Median
# beds in institution where work	455	0	3000	298.76	256.652	249.3
# exams per month in institution where work	285	35	100000	5629.47	11072.718	2415.6
# employees in institution where work	396	1	200000	633.79	10051.674	49.1
Valid N (listwise)	160					

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Number of Beds in Respondents' Institutions

Number of Beds	Frequency	Valid Percent	Cumulative Percent
0-10	9	2.2	2.0
11-20	6	1.3	3.3
21-30	9	2.0	5.3
31-40	8	1.8	7.1
41-50	11	2.4	9.5
51-75	25	5.5	15.0
76-100	33	7.3	22.3
101-150	48	10.5	32.8
151-200	47	10.3	43.1
201-250	42	9.2	52.3
251-300	39	8.6	60.9
301-350	34	7.5	68.4
351-400	39	8.6	76.9
401-450	15	3.3	80.2
451-500	24	5.3	85.5
501-600	21	4.6	90.1
601-700	10	2.2	92.3
701-800	23	5.1	97.4
801-900	4	0.9	98.3
901-1000	6	1.3	99.6
1001-3000	2	0.4	100.0
Total non-missing	455	100.0	
Missing	215	32.1	
Total	670	100.0	

Median = 238 beds.

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Number of Exams Performed per Month in Respondents' Institutions

Number of Exams Per Month		Frequency	Valid Percent	Cumulative Percent
Valid	35-300	27	9.5	9.5
	301-650	27	9.4	18.9
	651-1000	41	14.4	33.3
	1001-1500	17	6.0	39.3
	1501-2000	20	7.0	46.3
	2001-2500	18	14.3	52.6
	2500-3000	17	6.0	58.6
	3001-4000	13	4.6	63.2
	4001-5000	18	6.3	69.5
	5001-7500	29	10.1	79.6
	7501-10000	25	8.8	88.4
	10001-15000	17	1.1	94.4
	15001-100000	16	.4	100.0
Total non-missing		285	100.0	
Missing		385	57.5	
Total		670		

Median = 2130 exams per month.

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Number of Employees in Respondents' Institutions

Number of Employees	Frequency	Valid Percent	Cumulative Percent
1-5	22	5.6	5.6
6-10	24	6.0	11.6
11-15	29	7.3	18.9
16-20	28	7.1	26.0
21-25	24	6.0	32.1
26-30	23	5.8	37.9
31-35	18	4.5	42.4
36-40	14	3.6	46.0
41-50	33	8.3	54.3
51-60	22	5.6	59.8
61-70	17	4.3	64.1
71-80	19	4.8	68.9
81-100	20	5.0	74.0
101-125	20	5.0	79.0
126-150	16	4.1	83.1
151-200	22	2.0	88.6
201-300	18	4.5	93.2
301-500	10	2.5	95.7
501-1000	10	2.5	98.2
1001-5000	6	1.5	99.7
200000	1	.3	100.0
Total non-missing	396	100.0	
Missing	274	40.9	
Total	670		

Median = 45.

Size category of institution where workplace located

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-24.99th %tile	107	16.0	17.2	17.2
	25th-39.99th %tile	118	17.6	18.9	36.1
	40th-59.99th %tile	154	23.0	24.7	60.8
	60th-74.99th %tile	108	16.1	17.3	78.2
	75th - 100th %tile	136	20.3	21.8	100.0
	Total	623	93.0	100.0	
Missing	-9.00	47	7.0		
Total		670	100.0		

Based on average percentile across the three size measures.

Management Chapter members work in institutions that vary greatly in size from zero to 3,000 beds, from 35 to 100,000 exams performed per month and from 1 to 5,000 employees. (One respondent, a regional vice president for an international corporation, listed 200,000 employees.) For a given measure, the median size was 238 beds or 2,130 exams per month or 45.3 employees.

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Question: How many years (not including precertification employment or internships) have you been employed (not necessarily continuously) in the radiologic sciences?

Years Employed in the Radiologic Sciences

Years in Profession	Frequency	Percent	Cumulative Percent
< 1	2	0.3	0.3
1-5	3	0.5	0.8
6-10	34	5.2	6.0
11-15	52	7.9	13.9
16-20	86	13.1	27.0
> 20	481	73.1	100.0
Total non-missing	658	100.0	
Missing	12	1.8	
Total	670		

Mean (treating ">20" as 25 years) = 22.1 years. Median = 23.1 years

Almost three-quarters of Management Chapter members have been employed in the radiologic sciences for more than 20 years, with the mean time in the profession being 22.1 years and with half of the respondents working in the radiologic sciences for 23.1 years or more.

Question: How many years have you held (not necessarily continuously) a managerial position in the radiologic sciences?

Years as Manager in the Radiologic Sciences

Years as Manager	Frequency	Valid Percent	Cumulative Percent
< 1	4	.6	.6
1-2	33	5.0	5.6
3-5	76	11.6	17.2
6-10	130	19.8	37.0
11-15	164	24.9	61.9
16-20	99	15.0	76.9
> 20	152	23.1	100.0
Total valid	658	100.0	
Missing	8	1.2	
NA; I've never held a managerial position*	2	.3	
NA; my managerial positions have all been outside the radiologic sciences	2	.3	
Total	670	100.0	

Mean = 13.8 years. Median = 13.1 years.

*Both of these respondents indicated that they have been Management Chapter members for 6-10 years and more than 20 years, respectively.

The average Management Chapter member has held a managerial position in the radiologic sciences for 13.8 years out of a total of 22.1 years in the profession.

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Question: How many years have you held your current position?

Years in Current Position

	Frequency	Valid Percent	Cumulative Percent
< 1	56	8.5	8.5
1-2	129	19.5	28.0
3-5	177	26.8	54.8
6-10	120	18.2	73.0
11-15	87	13.2	86.2
16-20	37	5.6	91.7
> 20	55	8.3	100.0
Total non-missing	661	100.0	
Missing	9	1.3	
Total	670	100.0	

Mean = 5.6 years. Median = 5.0 years.

The average respondent has been in his or her current position for 5.6 years or about 40% of his or her total career as a radiologic sciences manager.

Question: In your current position, how many people (radiologic technologists and others, not including yourself) do you supervise?

Number of People Respondents Supervise

	Frequency	Valid Percent	Cumulative Percent
None	33	5.0	5.0
1-2	18	2.7	7.7
3-5	42	6.4	14.1
6-10	70	10.6	24.7
11-20	117	17.7	42.4
21-50	205	31.1	73.5
51-100	116	17.6	91.2
>100	59	8.8	100.0
Total non-missing	660	100.0	
Missing	10	1.5	
Total	670	100.0	

Median = 27.8. In this case, the mean did not provide useful information, given that one respondent's institution had 200,000 employees and two others, 5,000 employees. Therefore, the upper bound of the ">100" interval may be very high.

These managers supervise from zero to more than 100 people (radiologic technologists and others), with about half supervising 28 or fewer people.

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Question: In what modalities do the R.T.s you supervise practice? Check all that apply.

Descriptive Statistics

Modality	Proportion who Supervise Technologists in this Modality
Radiography	.7881
Radiation therapy	.1224
Nuclear medicine technology	.4791
Mammography	.6716
MRI	.4881
CT	.6448
Other modalities	.5343
Valid N (listwise)	670

Other Modalities Supervised

	Frequency	Percent
None specified	581	86.7
Angio/specials	1	.1
Angiography/ file room/ scheduling/ secretarial support staff	1	.1
Bone densitometry	3	.4
Bone density (DEXA)	1	.1
Bone density and ultrasound	1	.1
brachytherapy	1	.1
cardiac cath	3	.4
cardiac cath/angio	1	.1
Cardiopulmonary; bone densitometry, patient scheduling, phlobotomy	1	.1
cardiovascular	1	.1
CV	1	.1
CVT	1	.1
DEXA	2	.3
DEXA / ultrasound	1	.1
DEXA, stereotactic	1	.1
DEXA, ultrasound	1	.1
Dosimetrists	1	.1
ED, angio, nursing	1	.1
Gamma knife	1	.1
General diagnostic/ special studies / ultra sound	1	.1
General ultrasound	1	.1
Interventional special procedures. File room personnel. Radiology aides.	1	.1
Interventional techs	2	.3
Interventional; DEXA; ultrasound	1	.1
Mammo, PET, DEXA, US	1	.1
Medical assistant & 2 nurse practitioners	1	.1
Medical dosimetry	1	.1
N/A	1	.1
Neurophysiology	1	.1
Nonclinical employment, areas of certification indicated	1	.1
PET/ultrasound	1	.1
Radiology manager/supervisor positions	1	.1
Sonography & echocardiography	1	.1
Sonography, bone density	1	.1
Special procedures/ultrasound	1	.1
Special procedures, cardiac cath lab, cardiac US, ultrasound	1	.1
Trans cuptinists [?]	1	.1
U/S, cardiac cath	1	.1
ULT	1	.1
Ultrasonography, bone density, special procedures	1	.1
Ultrasound - bone density	1	.1

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Ultrasound		24	3.6
Ultrasound (diagnostic; vascular; cardiac); PET; EEG/EMG; sleep lab, pulmonary lab, GI lab, cardiac cath lab; interventional rad, schools of rad tech & ultra sound		1	.1
Ultrasound, angio, interventional		1	.1
Ultrasound, angiography		1	.1
Ultrasound, angiography		1	.1
Ultrasound, cardiac cath, specials		1	.1
Ultrasound, cath lab		1	.1
Ultrasound, DEXA		1	.1
Ultrasound, interventional		1	.1
Ultrasound, interventional radiol		1	.1
Ultrasound, neuro and vascular angiography		1	.1
Ultrasound, nuc med		1	.1
Ultrasound, PET scan, central scheduling		1	.1
Ultrasound, vascular U/S		1	.1
Ultrsound (are also RDMS & RVT)		1	.1
US & bone density & PET “only”		1	.1
US; echo, special procedures		1	.1
US, PET		1	.1
US/echo		1	.1
Vascular interventioinal radiology & ultrasound		1	.1
Total		670	100.0
Ultrasound and US plus other modalities	55		8.2*

*61.8% of those who specified one or more “other” modalities.

Substantial majorities of managers supervise radiographers, mammographers and computed tomography (CT) specialists. About half supervise nuclear medicine technologists and magnetic resonance (MR) specialists; only about an eighth supervise radiation therapists. More than half mentioned specialties other than the six on the checklist provided. Of 89 respondents specifying other specialties, more than 60% mentioned ultrasound, either alone or in combination with other specialties.

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Perspectives on Current Professional Issues

Question: What level of access to online CE do the staff technologists in your department have?

Staff Technologists' Level of Access to Online CE

Level of Access	Frequency	Valid Percent	Cumulative Percent
Not allowed to obtain CE online, even on their own time	14	2.2	2.2
May obtain their CE online, but not at the workplace	232	37.0	39.2
May obtain CE online using workplace computers, but must count the time spent doing so as "break" time	104	16.6	55.8
May obtain CE online using workplace computers and may count the time spent doing so as on-job time	253	40.4	96.2
Other policy with respect to staff tech access to online CE	23	3.7	99.9
May count as on-job time + other policy	1	0.2	100.0
Total non-missing	627	100.0	
Missing	43	6.4	
Total	670	100.0	

Other Policy With Respect to Online CE, Specified

	Frequency	Percent
Missing	642	95.8
Can be paid as education for time spent obtaining CE online.	1	.1
Does not access @ work	1	.1
Don't have access/hospital policy	1	.1
Encouraged!	1	.1
GE Tips program	1	.1
Institution only provides CE credit for RNs or assists them in getting their credits.	1	.1
It's not been done -- never been approached to allow this.	1	.1
Low active time	1	.1
May obtain CE online -- may count as on job time during slow work times	1	.1
Must use their own time & computers	1	.1
N/A	2	.3
No access at work	1	.1
No online access at work	1	.1
No specific [policies] exist	1	.1
Not available at work	1	.1
Not possible at this time at our facility.	1	.1
Online not available.	1	.1
Online not available to staff	1	.1
Provide in-house CE	1	.1
Subscribed to Sinclair/ASRT for all technologists	1	.1
Technologist may not use computer at work for any internet activities, including CE.	1	.1
Technologists are encouraged to obtain continuing education through online sources. In fact, I research sites for CE for them. I also print articles & tests for them when I find them, esp'ly if they are free.	1	.1
Technologists may do CE online on two computers not in the work area on their own time or if work is done. Example -- slow day.	1	.1
Therapists attend local & national meetings for CE with full funding.	1	.1
Using workplace, may count time if permitted. Time is not set aside.	1	.1
We encourage online CE, but don't have the computer availability to do it at work.	1	.1
We reimburse for CEs.	1	.1
Total	670	100.0

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Policies concerning staff technologist access to online continuing education (CE) varied considerably. Forty percent of the Management Chapter members reported that their staff technologists may obtain their CE online using workplace computers and count the time as on-job time. However, 39% said that staff technologists may not obtain CE online at the workplace, and another 17% reported that technologists may access online CE at the workplace but must count the time as break time, personal time or unpaid leave.

Question: Which computers are the technologists you supervise permitted to use to obtain online CE? Please check all that apply.

Descriptive Statistics

Computers OK for Online CE	Proportion checking
Their own computers at home	.7985
Workplace computers outside department	.1597
Workplace computers within department	.4507
Same consoles used for procedures	.0791
Other computers that can be used for online CE	.0433
Valid N (listwise)	670

More than half (53%) of Management Chapter members indicated that staff technologists may use computers within their departments for online CE, with 8% saying that the technologists may use the same workstations used for performing procedures. A further 16% of respondents indicated that computers were available for CE purposes but outside the imaging or radiation therapy department.

Location and Nature of Other Computer(s) for Online CE

		Frequency	Percent
Missing		646	96.4
	Break area	1	.1
	Dedicated education PC in break room	1	.1
	Designated computers w/ internet access not directly used for patients.	1	.1
	Each employee has their own computer	1	.1
	Hospital IT Dept & Library	1	.1
	Library - hospital	1	.1
	Manager's office	1	.1
	My computer in my office with my observation	1	.1
	N/A	1	.1
	NA	1	.1
	None available	1	.1
	Office manager's	1	.1
	Our computers outside the imaging area	1	.1
	Our dept does not have computers or e-mail access	1	.1
	PCs at personal desk or in computer room	1	.1
	Secretarial	1	.1
	Specified computers	1	.1
	Staff development (when not busy w/ rad duties)	1	.1
	Supervisor office area (monitored)	1	.1
	Supervisor's computer	1	.1
	Telerad in Drs [?] workroom when not in use	1	.1
	The hospital training lab	1	.1
	Training & Education Dept. of hospital	1	.1
	Work computers	1	.1
	Total	670	100.0

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Question: What is your department's policy toward staff technologists' use of the Internet for purposes other than online CE?

Policy for Internet Uses Other Than CE

Policy	Frequency	Valid Percent	Cumulative Percent
*Must be on own time, must not involve workplace computers	176	28.6	28.6
*Must be clearly related to the performance of their job	134	21.8	50.4
*Must be clearly related to job and/or professional development as an R.T.	56	9.1	59.5
*Must be clearly related to job or serve an educational purpose; not personal or recreational	146	23.7	83.2
*OJT Internet use for any purpose tolerated or encouraged if doesn't interfere w performance of job	79	12.8	96.0
Must be on own time *and* related to job performance and/or prof'l development	1	.2	96.2
Must be related to job and/or prof'l devel or serve an educational purpose	2	.3	96.5
Tolerated/encouraged for any purpose if doesn't interfere *but* must be related to job performance or serve an educational purpose	1	.2	96.7
Tolerated/encouraged + Other policy	1	.2	96.9
*Other policy with respect to non-CE Internet use.	19	3.1	100.0
Total non-missing	615	100.0	
Missing	55	8.2	
Total	670	100.0	

*One of the provided alternatives.

Other Non-CE Internet Policy Specified

	Frequency	Percent
Missing	663	99.0
May use on the job internet but not on company time.	1	.1
No internet access at work	1	.1
On line access not available.	1	.1
Our dept. does not have computers or email access.	1	.1
Personal: own time; professional: any time	1	.1
Related to job performance, professional development, education. Personal limited if it doesn't interfere w job.	1	.1
Within the time allowances of the carrier contracted	1	.1
Total	670	100.0

Question: Please indicate your agreement or disagreement with each of the following statements about obtaining CE credit for applications training.

Descriptive Statistics

Statement	N	Mean	Std. Deviation	% Who Agree w Statement
Apps training important; should get CE credits	633	1.7188	.97755	95.1
CE for OJT apps training adversely affects staff morale	616	4.5990	1.48705	21.4
Techs up in arms if CE for apps training discontinued	620	2.1919	1.35837	83.4
CE credit for OJT apps training should be discontinued	622	5.3055	1.03867	6.8
Many techs awarded CE haven't attended full training	598	3.8980	1.50642	42.5
*FAVAPPCE	586	1.4595	.83104	
Valid N (listwise)	586			

*FAVAPPCE = a measure of managers' overall favorable perceptions of CE credit for applications training. The value was computed by adding favorable and subtracting unfavorable scores, weighting by the extremity of the statement. Scores range from -2.5 (highly unfavorable) to +2.5 (highly favorable).

For individual items, 1 = Strongly agree, 2 = Agree, 3 = Slightly agree, 4 = Slightly disagree, 5 = Disagree, 6 = Strongly disagree.

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Attitudes towards applications training were generally positive. Substantial majorities of managers agreed with the statements, "Applications training is one of the most important kinds of continuing education; its value should be recognized by the granting of CE credits" and "Technologists in my department would be up in arms if I (or the ARRT) were to discontinue … CE credit for on-the-job applications training." Sizeable majorities disagreed with the statements that "Granting CE credit for on-the-job applications training adversely affects staff morale" and "The granting of CE credit for on-the-job applications training should be discontinued." The only negative indicator was that 42.5% of Management Chapter members agreed with the statement, "Many of the technologists awarded CE credits for on-the-job applications training have not been able to attend the full training session(s)."

Distribution of Overall Positive Feelings About CE Credits for Applications Training

Overall Favorable Feelings Toward CE for Applications Training	Frequency	Valid Percent	Cumulative Percent
-1.91 to -1	9	1.5	1.5
-.99 to 0	24	4.1	5.6
.01 to .5	42	7.2	12.8
.51 to 1	70	11.9	24.7
1.01 to 1.5	145	24.7	49.4
1.51 to 2	114	19.5	68.9
2.01 to 2.5	182	31.1	100.0
Total non-missing	586	100.0	
Missing	84	12.5	
	670	100.0	

Question: Please add here any other comment you would like to share about CE credit for applications training.

Comment	Frequency	Percent
Missing	559	83.4
(Should apply to RIS, CIS, PACS, etc.) CA only gives CEU credits for "the application of xray to the human body". Starting Jan 2003 ultrasound, nuc med, MRI	1	.1
A necessity	1	.1
Actual hands on training is far superior to second hand knowledge from newly trained personnel	1	.1
Application training is one of the few hands-on CEU available, it is quality; it is specialty CEU	1	.1
Application training should be awarded CE only if learning outcomes are quantifiable	1	.1
Applications CE should be allowed but not as much as received. Ex techs receive 32 CEs for 4 days - too much	1	.1
Applications personnel do not allow entire staff opportunity to obtain applications training	1	.1
Applications training has always been the most applicable training to our job.	1	.1
Applications training is better with 'hands on' and if the technologist can benefit from CE credits, that individual could be considered a resource and responsible for other staff training of equipment.	1	.1
Applications training is extremely important & should be recognized as a learning & growth opportunity	1	.1
Applications training is performed using commercial focused views which may not provide skill sets to advance the professional or profession	1	.1
Applications training is so infrequent that no tech should rely on it for CE credits. it is an additional welcome opportunity for CE though	1	.1
Applications training is vitally important whether CE credits is or is not offered	1	.1
Applications training, I strongly feel that CE credits should be approved.	1	.1
Apps is sometimes fragmented or limited to only a few	1	.1
Apps training does provide education	1	.1

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Apps training is very intense w/a considerable amount of info presented in a short time.	1	.1
Apps training keeps the techs fresh & up to date and always learn more than just how to run the new machine	1	.1
Apps training should allow for techs to rotate thru the duration and receive all necessary info/training	1	.1
At my facilities you must attend the complete session for CE credits	1	.1
Believe should be aimed if you approved content	1	.1
CE are a continuing stress point among RTS & the shortage & overworking of existing RTS will self destruct the system	1	.1
CE credit for applications training should be continued	1	.1
CE credit for apps should pertain to the modality they work in	1	.1
CE credit for this needs to be changed. Difficult to have everybody there for every bit of training. Lots of constraints need to continue to get work done being the busiest	1	.1
CE credit should be given to those who truly attend the training credit = hrs spent - no exceptions	1	.1
CE credits are given to vendors on application training too easily. the amount of training- for the amount of credits needs to be adjusted	1	.1
CE credits should be awarded but more actual time on the application should be monitored	1	.1
CE credit for applications is a "benefit" for my employees & they are excited about it. It is a stressful time & makes it tolerable during change.	1	.1
CEUs should be granted relative to amount of time spent training	1	.1
Clearly if the product is new on the market with the latest, greatest, unfamiliar components I think that credits are OK. [Slightly agreed with elim of CE for apps trng.]	1	.1
Directly related to improving/maintaining competency therefore consistent w/goals of CE	1	.1
Due to capital budget limitations new equip was a source of celebration & higher morale. Everyone wanted to be part of the process	1	.1
Due to strict health info management regulations most staff do not have Internet access	1	.1
During apps due to staffing not all are able to attend training. We train the trainers	1	.1
Each training course outline should be approved for appropriate CE credits	1	.1
Excessive credit received for limited time training	1	.1
Fot (?) at they only get credit for time attended	1	.1
Given the technological sophisticated equipment utilized in imaging services, it is essential that apps training be recognized for CE credits	1	.1
Granting of CE credits for applications training should continue	1	.1
Hours awarded need to be more realistic (inflated now). Tighter control of attendance is needed. Limit # of hrs of apps training applicable for each biennium	1	.1
I believe it is a managers role to decide who receive which applications for CE	1	.1
I believe that is appropriate to give credit for OJT applications training. it does need to have specific objectives to complete	1	.1
I believe that the tech should attend the whole training and it should be worthwhile. I do not believe that it is 1 hr = 1 CE	1	.1
I believe they should attend the full OJT training sessions to qualify for ce credits	1	.1
I did applications for [name of company over the course of 4 yrs. you cram a lot info into someone in a short time. Those credits are necessary! If credits drop so will productivity.	1	.1
I don't understand why this is such a big topic of conversation. Techs can get CE credits for almost anything	1	.1
I have always made sure the technologists spent the full time with apps training specialist	1	.1
I think any formal training should be granted ARRT credits. ARRT makes it difficult to get in-services credit	1	.1
I think ASRT could keep by giving info specific requirements for apps & ????	1	.1
I think it's ridiculous to even consider not allowing ce credits for apps training, whose bright idea was this? Must be the same intelligent person who required Master's degree for program directors	1	.1
I think the applications person should be responsible to see that all names have attended	1	.1
I think those receiving CE credits for applications training should actually use that	1	.1

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equipment - ex MRI tech should not get credit for mammo apps		
If apps training CE is still issued the # of credits allowed should be reduced (maybe 25% of what is now given).	1	.1
If staff unable to attend apps training full session (8 hours) w/i limited days, we have prorated CEU based on hours of attendance	1	.1
If stricter adherence to full attendance is the issue, that should be addressed rather than discontinuing it altogether	1	.1
It's done for physicians, nurses and other allied health professions. Seems to be industry standard	1	.1
It is a great benefit & encouragement to learn	1	.1
It is actually unfair in that many "vendors" require all day to get CE & just becomes available to only 1 or 2 - others are left out	1	.1
It is difficult for all techs to get the training; some get left out	1	.1
It is the managers responsibility to that therapists can attend all necessary applications training	1	.1
It should be considered strongly to allow these credits	1	.1
Learning in any manner is vital. All new equipment requires application and learning	1	.1
Learning new equipment is an integral part of the tech's job description & should be not only rewarded w/CE credits, but also encouraged	1	.1
Limiting the number of techs to receive training and CE credit is very disheartening and cause discontent	1	.1
More than one apps session should be held or scheduled to include all employees involved with the specific modality/equipment use	1	.1
Most apps personnel will only grant to those who attend entire session. Many vendors now offer extended apps to train several sessions	1	.1
Most vendors are very serious about their CE opportunities. it has been my experience that techs only rec'd credit for the hours attended	1	.1
Much stricter than in the past	1	.1
My view is that technology continually grows & so must technologists. It is appropriate that CE credit is given for Apps training.	1	.1
New open MRI trained one CT tech he learned more and is better able to provide patient care due to training. No DR readings could compare to the apps provided, wouldn't you agree?	1	.1
No charge from vendors or ASRT	1	.1
Not aware of the issue	1	.1
Nothing, other than there is absolutely no reason to take it away	1	.1
Obtaining credits for applications encourages staff to attend full training session which assists them to be more competent	1	.1
On the job application must be considered as all ed activities-participants must complete program for credit. If widely viewed as impossible then downgrade overall credit to 1/2 normal amount	1	.1
On the job or onsite at vendor apps CE should only be awarded for those currently practicing in the modality-period!	1	.1
ONLY A FEW OF THE TECHNOLOGISTS CAN BE AWARD CE CREDIT. COMPANY WILL ONLY WORK W/LIMITED TECHNOLOGIST NOT ALL	1	.1
PLEASE CONTINUE THIS PRACTICE	1	.1
Providers should assure content and materials provide sufficient info & references -- RT should not be short changed.	1	.1
Recently had GE CT training -they would give CME credit because "entire" 3 day commitment staff couldn't meet. Said it was ASRT guideline-they did attend 8 hours each	1	.1
Some vendors don't offer it since they didn't seek approval. This upsets all staff.	1	.1
Applications doesn't just show equipment, it gets great discussion & pertinent refresher of concepts	1	.1
Staff should receive CE for apps training. taking that away would be punishing them for no reason	1	.1
Staff will attend any applications training if CEs are awarded	1	.1
Taking away CEs for O.J.T./apps will worsen the shortage of RTS in advanced modalities	1	.1

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Technologists should be awarded CE credits only for training they attend	1	.1
Testing should be related to applications training via 3rd party or online feedback. Not just for attending	1	.1
The availability of training is never convenient for all staff especially 2nd/3rd/weekend staff - reps give excessive CE credits for actual time of training ex 12 credits for 2 contact hours	1	.1
The entire session must be completed for credits to be given/allow only a certain number of credits for apps training	1	.1
The experience with on job applications	1	.1
The hospital/organization pays a lot for apps training in addition to the regular apps that "go along" w/new equipment CE credits an important feature as to weather or not to purchase additional apps time	1	.1
The RTs in our private practice do not have the opportunity to earn CE during apps	1	.1
The s/b an evaluation individually to grade each on knowledge retained & actual hrs spent w/apps specialist. No flat # across board	1	.1
The trainers are very specific about attendance parameters for apps training. You must complete all of it to receive CE.	1	.1
There do need to be standards-a post test would be useful to submit	1	.1
There should only apply to technologists in that modality an MRI should not go to CT apps for CEUs	1	.1
They should not be granted unless completed in full by the staff member and have some kind of competency testing upon completion.	1	.1
This does not directly apply to my situation so i merely gave my opinion	1	.1
This is a very important part of training & self-fulfillment which is usually a free benefit to my staff. Taking this away would hurt!	1	.1
This is one feature of CE credit that benefits hospitals or training documentation	1	.1
This is very valuable to both techs and employers - it is mandated by JCAHO, techs should get credit for that learning	1	.1
Training definitely enhances tech ability to provide better job performance patient care	1	.1
Tumor board conferences should be recognized as continuing education and credits should be awarded	1	.1
Unless there is a permanent disability or other barriers, I think all techs have credits available to them through seminars, internet, mail	1	.1
Unless you can carry the equipment to your next job, apps CEs are not relevant	1	.1
Valuable tool as it is impossible to get staff out of office for training - wonderful to have it in-house	1	.1
Very valuable & probably training most relevant to job	1	.1
When trainers are scheduled- many part-time employees do not qualify for partial credit - why not?	1	.1
With digital imaging, PACS, and networking, vendors are introducing equipment that requires new skill sets for staff. they have a responsibility to educate in its use and how it relates to the workflow.	1	.1
With electronic imaging and distribution, many technologists are not only learning about the equipment but about how to perform their roles in a new way. Need to know new ways to troubleshoot problems. Almost need an entirely new skill set	1	.1
With GE, you attend all of the applications training or you do not get credit - period	1	.1
Total	670	100.0

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Question: Does your facility employ R.T. aides?

	Frequency	Valid Percent	Cumulative Percent
No	299	47.0	47.0
Not sure	6	1.0	48.0
Yes	331	52.0	100.0
Total valid	636	100.0	
Missing	34	5.1	
Total	670	100.0	

Slightly more than half of the facilities where these Management Chapter members work employed R.T. aides, although these employees may not be called by that term.

Question: If your facility employs R.T. aides (or persons you think might be considered R.T. aides), how are they trained?

Training Method	Frequency	Percent Checking
Academic program	9	2.7
On the job, supervised by the technologist the aide is assigned to	170	51.2
On the job, supervised by the department manager	96	28.9
In an on-site program lasting x days	43	13.0
Other training method	23	6.9
Total Valid (from 332 cases)	341	102.7
Missing	338	50.4
Total	670	100.0

Length of RT Aide Training Program, in Days

Length of Training Program	Frequency	Valid Percent	Cumulative Percent
.50 to 2 days	6	7.7	15.4
2.01 to 5 days	12	15.4	30.8
5.01 to 10 days	25	32.1	62.8
10.01 to 15 days	5	6.4	69.2
15.01 to 20 days	10	12.8	82.1
20.01 to 30 days	7	9.0	91.0
30.01 to 40 days	4	5.1	96.2
40.01 to 90 days	3	3.8	100.0
Total non-missing	78	100.0	
Missing	592	88.4	
Total	670		

Mean = 15.2 days; std. dev. = 16.6 days; median = 8.0 days.
Note: Multiplied number of weeks by 5 and divided number of hours by 8 in computing number of days.

A large majority (80%) of these facilities train R.T. aides on the job (OJT). Most (64%) of the facilities using OJT entrust training to the technologist to whom a given R.T. aide is assigned. Fewer than 3% of managers reported relying on academic programs to train R.T. aides. Among the 13% of facilities that use an on-site program for R.T. aide training, the length of that program varied from half a day to 90 days, with the median length being 8 days.

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Other Institutions Where R.T. Aide Trained, Specified

	Frequency	Percent
	615	91.8
.	51	7.6
Distance learning program	1	.1
Hospital based	1	.1
RT students from local college	1	.1
Sr rad students from community college	1	.1
Total	670	100.0

Other Training Methods for R.T. Aides, Specified

	Frequency	Percent
Missing	636	94.9
2nd year radiology students	1	.1
Above 2 choices	1	.1
Body mechanics by physical therapist	1	.1
CNA certification	1	.1
Computer training, mandatory in-service etc. out of dept. but within the hosp.	1	.1
IE patient transport & film library	1	.1
In-services	1	.1
Med asst	1	.1
Mentorship with CNAs on nursing units	1	.1
N/A	2	.3
N/A	1	.1
OJT nurses aides to assist RTs & RNs with patient care, stocking, inventory mgt, & misc duties	1	.1
On-the-job training provided by other aides	1	.1
On-the-job w/other techs aides	1	.1
On - site class time	1	.1
On job training by tech & department manager	1	.1
On the job	1	.1
On the job training by other transporters	1	.1
Orientation period that varies then OJT	1	.1
Oxygen	1	.1
Plus ergonomics training and hospital provided medical training	1	.1
Provided by facility	1	.1
Receptionist, RIS staff	1	.1
RT aides are all 2nd year/senior rad techs program students	1	.1
Students enrolled in rad tech program	1	.1
Technicians returning to work but unregistered (not renewed)	1	.1
Trained by lead imaging assistant	1	.1
Trained by the other aides	1	.1
Trained by working aides on the job	1	.1
Training with senior aides	1	.1
Usually 2nd year students	1	.1
Via on the job training by the other aides	1	.1
We have transporters who help with that sort of thing	1	.1
Total	670	100.0

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Question: Under what conditions do you employ temporary technologists (also known as locum tenens or traveling technologists)?

Descriptive Statistics

	Proportion Checking
To fill in for perm techs who are on leave	.1881
As supplementary staff when workload high	.0731
As temporary expedient until perm staff can be hired	.4701
As essentially permanent aspect of dept operations	.0239
Other circumstances	.0493
Never	.3642
No response	.0552

N = all 670 respondents.

Other Circumstances, Specified

Circumstance(s)	Frequency	Percent
Missing	647	96.6
Allow techs to go to seminars	1	.1
Extreme staffing shortages.	1	.1
Hasn't been necessary. Do not know what the future holds.	1	.1
Have never done so, but may HAVE to consider @ some point.	1	.1
Have not had to use temps for several years.	1	.1
Last 4-5 years have had minimum turnover of RTs.	1	.1
Not allowed	1	.1
Only ultrasound, 1 tech only trained	1	.1
Only when a critical need is present.	1	.1
Only when I have to. But that's been Off & on (mostly on). Since 1996 easy. (One agency tech was here 2 yrs.)	1	.1
Only when there are no appropriate applicants to be hired full time or if someone is on a leave	1	.1
Shortage in all modalities, esp. CT-US-Diagnostic	1	.1
Techs on medical leave.	1	.1
This is very rare; none for several years	1	.1
To cover striker	1	.1
To fill specialty dept (NM) during vacation	1	.1
Used them only once -- hopefully won't use again	1	.1
Very rarely.	1	.1
We added an MRI mobile -- our 2nd MR -- to see if we needed to add another permanent scanner -- 6 mo. trial.	1	.1
We have PRN techs -- hire as employees of the hospital. We do not & will not use agency techs.	1	.1
When morale is down due to short staff to give employees a "break"	1	.1
Would do if necessary (no need)	1	.1
Would if couldn't hire	1	.1
Total	670	100.0

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Question: How does the average salary or hourly wage that local temps ("those who reside in the local area and commute from their homes to their temporary assignments") receive in your department compare to the average received by permanent staff with comparable credentials?

Local Temps' Compensation in Comparison to Permanent Techs	Proportion Checking	Percent of Those Making Comparison
Salary/wages x % higher than permanent techs' average	.2537	78.3
Salary/wages within 5% of permanent techs' average	.0657	20.3
Salary/Wages x % lower than permanent techs' average	.0045	1.4
Total comparing average salary or hourly wage	.3539	100.0
Considering other factors, temps' total comp higher	.2045	61.2
Considering other factors, total comp equivalent	.1090	32.6
Considering other factors, temps' total comp lower	.0209	6.2
Total comparing total compensation	.3344	100.0
Other local temp vs. perm tech comparison	.0552	
No response	.5000	

% by Which Local Temps' Salary/Wage Higher or Lower (-) than Permanent Techs'	Frequency	Valid Percent	Cumulative Percent
-40	1	0.3	0.3
-15	1	0.3	0.6
-5 to +5	46	15.4	16.1
6-10	27	9.1	25.2
11-20	50	16.8	41.9
21-30	56	18.8	60.7
31-40	25	8.4	69.1
41-50	41	13.8	82.9
51-75	16	5.4	88.2
76-100	19	6.4	94.6
101-200	13	4.4	99.0
201-300	3	1.0	100.0
Total making comparison	298	100.0	
Missing	372		
Total	670		

Mean = +37.8%; median = 24.8%

Almost 80% of respondents report that they pay local temps (those "who reside in the local area and commute from their homes to their temporary assignments") more than they do permanent technologists; only about 1% say they pay local temps less, with the net result that about half of the managers estimate that local temps receive at least 25% higher salary/wages than do the permanent technologists in their department. Taking into account "such factors as health insurance and other benefits", 61% of these managers feel that local temps' overall compensation is higher than permanent techs'; 6%, lower; and about a third believe that total compensation comes out about the same for local temps as for permanent techs, all things considered.

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Other Local Temp/Permanent Pay Comparison

	Frequency	Percent
Missing	624	93.2
Considering benefits are not included with per diem their pay is comparable to staff	1	.1
Do not use -- Temps feel they can pick & choose work assignments. I feel I am lucky-- I have used Agency techs in cath lab & non-invasive cardiology -- or from a sister hospital, paying these techs x dollars more per hour.	1	.1
Do not use or have not used local temps	7	1.0
Don't know	4	.6
Don't know what "temps" make. I know only what I pay the company.	1	.1
Have not used either in several years	1	.1
I'd rather spend the $6000 on bonus or relocation for new hire	1	.1
I'm not sure what the temps make its not common knowledge. The director is aware of that.	1	.1
I don't know what the techs make, I only know what we pay the company	1	.1
I haven't used local temps for 3 years	1	.1
If used temps would be about 10% higher. But wages here (this facility) are about 25-30% lower than ASRT survey.	1	.1
Local temp don't get any benefits	1	.1
Local temps not available	1	.1
Local temps paid more but wage is not known by me ... per contract stipulations	1	.1
N/A	2	.3
No info on temps	1	.1
Not privy to that info	1	.1
Perm = $35/hr Local temp = $65	1	.1
Perm rad staff tech -- $20/hour. Local temp tech - $45/hr	1	.1
Retired	1	.1
The above is compensation paid to the temp agency. The temp themselves are paid slightly higher than a permanent tech taking into account benefits.	1	.1
The high compensation for local temps is partly the reason why the shortage is so great. Technologists are jumping around from one site to another.	1	.1
There are no local temp agencies in our area	1	.1
Traveling temps' compensation hourly unknown -- only familiar with monthly invoice amount of the agency	1	.1
Try never to have temps again. Had used locums for 1.5 years. Bad situation when its not temp	1	.1
Unable to compute, as the ave. traveler does not get paid but a fraction compared to the invoiced amount going to the company. Same is true of "local" temps. We save lodging	1	.1
Unknown -- will not hire local temps.	1	.1
Use agency and pay per hour to staffing company. No benefits and staff within commuting distance.	1	.1
Use per diem staff at same rate	1	.1
We do not have any local temps in our area	2	.3
We do not use local temps except if they are on-call staff. They receive the same pay as staff.	1	.1
We don't use local temps	1	.1
We have no local temps at this time. We have 2 per diems who work 36+ hours a month.	1	.1
We pay about the same pay and they receive no health insurance and other benefits.	1	.1
Will not use local temps	1	.1
Total	670	100.0

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Question: How does the average salary or hourly wage that traveling temps ("those who reside outside the local area and must find short-term housing for the duration of the assignment") receive compare to the average received by permanent staff with comparable credentials?

Traveling Temps' Compensation in Comparison to Permanent Techs'	Proportion Checking	Percent of Those Making Comparison
Salary/wages x % higher than permanent techs' average	.2060	89.6
Salary/wages within 5% of permanent techs' average	.0209	9.1
Salary/Wages x % lower than permanent techs' average	.0030	1.3
Total comparing average salary or hourly wage	.2299	100.0
Considering other factors, travelers' total comp higher	.2478	98.4
Considering other factors, total comp equivalent	.0224	8.9
Considering other factors, travelers' total comp lower	.0015	0.6
Total comparing total compensation	.2517	100.0
Other travelers/permanent techs comparison	.0642	
No response	.5597	

% by Which Traveling Temps' Salary/Wage Higher or Lower (-) than Permanent Techs'	Frequency	Valid Percent	Cumulative Percent
-25	1	0.4	0.4
-5 to +5	15	6.0	6.4
6-10	3	1.2	7.6
11-20	31	12.4	19.9
21-30	48	19.1	39.0
31-40	21	8.4	47.4
41-50	54	21.5	68.9
51-75	30	12.0	80.9
76-100	21	8.4	89.2
101-200	18	7.2	96.4
201-300	8	3.2	99.6
400	1	0.4	100.0
Total making comparison	251	100.0	
Missing	419	62.5	
Total	670		

Mean = +62.8%; median = 41.7%

Not surprisingly, the contrast between traveling temporary technologists (those "who reside outside the local area and must find temporary housing in the area where their temporary-assignment facility is located for the duration of that assignment") and permanent staff is even stronger. Ninety percent of mangers indicated that traveling temps receive higher salary and/or wages vs. only 1% of respondents who report that their departments pay travelers less than permanent staff. According to those surveyed, the median amount by which traveling temps' pay exceeds permanent techs' pay is 42%. Further, consideration of "such factors as temporary housing costs, per diem, health insurance and other benefits" makes the traveler/permanent comparison slightly *more* favorable to traveling temps. In particular, 92% of respondents reported that total compensation to traveling technologists is higher than for permanent staff; less than 1% of managers indicated that compensation is lower for travelers than for permanent staff; and 8% of those surveyed thought that total compensation is roughly equivalent, all things considered.

However, a number of Management Chapter members cautioned in written comments that the pay and other benefits actually received by traveling temps should be distinguished from the much higher amounts paid to temporary staffing agencies.

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Other Comparisons Between Traveling and Permanent Technologists

	Frequency	Percent
Missing	618	92.2
Agency tech higher than independent coordinator	1	.1
Agency techs do not apply to this facility	1	.1
Do not use traveling temps	17	
Do not use traveling temps (too expensive)	1	.1
Don't know	1	.1
Don't use temps	1	.1
Don't use traveling technologist -- only use local.	1	.1
Have never hired a traveling temp so don't know, but would think they are higher cost	1	.1
Have no idea how much of the compensation they receive, we are paying $70+/hr for temps	1	.1
I don't know what the techs make, only what we pay to the company	1	.1
Must pay meals, lodging, and other expenses	1	.1
N/A	6	.9
No comment -- no traveling temps at our facility.	1	.1
No info on temps	1	.1
No travel temps	1	.1
No traveling temps in department	1	.1
Not familiar w/traveling temps salary-only familiar w/cost to facility for their services-which is very marked far higher than for permanent technologists	1	.1
Not privy to info. Use temp company.	1	.1
Only used local free lancers	1	.1
Retired	1	.1
See previous answer [unknown; only know what pay agency monthly]	1	.1
Temps need much training	1	.1
This is handled by human resources	1	.1
Traveling temps paid more but wage no known by me per contract stipulations	1	.1
Unable to compute as the average traveler doesn't get paid but a fraction compared to the invoiced amount going to the company. Same for local temps -- we save lodging costs only.	1	.1
Use local temps not traveling temps	1	.1
We are fortunate not to need temps - travelers	1	.1
We have never needed or used temps	1	.1
We have to pay about double per hr - don't know how that breaks down into act employee salary	1	.1
We pay fan hourly rate for all housing/travel, etc. @ $65/hr	1	.1
What i pay agency is not rate techs get	1	.1
Why a technologist would work for an agency I cannot understand. They could do better on their own. Eliminate the middleman.	1	.1
Total	670	100.0

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Question: Considering not only direct compensation but benefits (health insurance, retirement, etc.) relative productivity, impact on morale, training time and cost, and other pluses and minuses, how does the cost/benefit ratio of employing a local temp compare to the cost-benefit ratio of hiring a permanent technologist?

Cost-benefit ratio, local temporary technologist vs. permanent technologist	Frequency	Valid Percent	Cumulative Percent
Permanent much more cost effective	334	82.3	82.3
Permanent somewhat more cost effective	37	9.1	91.4
Checked both "permanent much more cost effective" and "Local much more cost effective", connected by "or"	1	0.2	91.6
Cost/benefit ratio is about the same	10	2.5	94.1
Local somewhat more cost effective	18	4.4	98.5
Local much more cost effective	6	1.5	100.0
Total non-missing	406	100.0	
Missing	264	39.4	
Total	670	100.0	

Question: Considering not only direct compensation but (health insurance, retirement, etc.) relative productivity, impact on morale, training time and cost, and other pluses and minuses, how does the cost-benefit ratio of employing a traveling temp compare to the cost-benefit ratio of hiring a permanent technologist?

Cost-benefit ratio, traveling technologist vs. permanent technologist	Frequency	Valid Percent	Cumulative Percent
Permanent much more cost effective	352	91.7	91.7
Permanent somewhat more cost effective	26	6.8	98.4
Cost/benefit ratio is about the same	0	0.0	98.4
Traveler somewhat more cost effective	5	1.3	99.7
Traveler much more cost effective	1	0.3	100.0
Total non-missing	384	100.0	
Missing	286	42.7	
Total	670	100.0	

The vast majority (92%) of managers considered hiring a permanent technologist to be much more cost effective than hiring a traveling temp; another 6% considered the permanent technologist somewhat more cost effective.

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Question: All factors considered, if you have or anticipate an opening in your department, would you prefer to fill that position with a permanent technologist, a local temp or a traveling temp?

Rank order	Frequency	Valid Percent
Permanent > Local > Traveler	354	78.1
Permanent > Local = Traveler	1	0.2
Permanent > Traveler > Local	29	6.4
Permanent > Traveler (Local temp not rated)	2	0.4
Permanent > Traveler (Traveling temp not rated)	2	0.4
Permanent only type rated	61	14.8
Local > Permanent > Traveler	3	0.7
Traveler > Local > Permanent	1	0.2
Total non-missing	453	100.0
Missing	217	47.9

">" signifies "preferred to;" "=" signifies that two choices were ranked the same. Respondents were asked to rank order their choices using "1" for first choice, "2" for second choice and "3" for third choice.

Question: If you have any comments on the above issues or on any other aspect of your role as a manager, you may write those comments in the space below.

Several (102) Management Chapter members commented on the issues raised in the questionnaire or on other aspects of their managerial roles, and 56 wrote comments beside particular questions on the survey. Some comments not relevant to professional issues are omitted.

Comments

	Frequency	Percent
Missing .	568	84.7
[Appears to have noticed and completed only one side of each sheet of the questionnaire.]	1	.1
1) RT(R) to registered radiographer no debate over the meaning of "Tech". (2) We are professionals if we act like professionals. No amount of $ on lobbying will ever change that. Spend those $'s on a national ad campaign that would tell college bound about radiology careers. (3) In my 15 years in hospitals in NC, NY and MO no one from the local, state or national level has ever entered a department, asked ?s, got input or recruited membership other than by mailing.	1	.1
A manager's role over the years has changed to one of quality issues to one of coding and reimbursement issues, down sizing because of reimbursements being down, but have to maintain quality in all areas with less people. Tough to find the balance and stay on target.	1	.1
ACLS (recent) should continue to be acceptable credit for CE for RTs.	1	.1
	1	.1
FTE'S/		
All the technologist language should be changed to dosimetrist, in my situation.	1	.1
Although I have not needed to hire temps, staff is highly aware of the high salaries & feel discontent that our salaries do not compare. It is a difficult situation to remain competitive & financially stable at the same time.	1	.1
At the age of 53, I am so happy to be out of management -- only responsible for my own performance.	1	.1
Bad situation having temps or local temps. Staff resents the temps from talking about wages. Would like to see techs be more secretive about their wages. Tired of them sharing.	1	.1
Being a Chief Therapist myself at a small cancer center I have come to realize the vast knowledge one must have on all issues. In order to fine tune monies received from insurance companies, one must study the CPT code book as well as code the	1	.1

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patient's disease correctly to maximize payment. This by far is the most pressing issue out there.		
Being a Lead Tech I felt like I wasn't able to give as much info on this survey as someone directly in management. Hope my info was useful.	1	.1
Have hired agency RNs. very costly to org but necessary. Would hire rad techs if operations were dependent. Agency RNS were well trained but resented by staff because of pay structure	1	.1
I am disappointed as to the way credits are earned. Directed readings do not allow the education we need. Answers are shared (although I cannot prove it) so the only person that learns anything is the true reader. I would like to see that at least 12 credits earned by physically attending lectures.	1	.1
I am very focused on my employees. I have only used PRN employees during one year when RT crisis at all time high & stress levels were high for my staff. As a director, I would like more interaction w/ managers to see what everyone else is doing.... I have been at one facility for 20 yrs & have limited insight to others & self trained.	1	.1
I cannot be of much help as I retired in July 2002.	1	.1
I have 6 part time technologists all with at least 10 yrs experience. We do not pay as well as hospitals but we are very flexible with hours	1	.1
I have only just retired from my position due to health issues. I have filled this questionnaire out as it has been valid up until less than one month ago. I leave it to you to include the data or not.	1	.1
I hope this information helps.	1	.1
I left management to pediatric coordinator last time. This occurred in July 2002	1	.1
I manage 2 depts 30 minutes from each	1	.1
I think we should dramatically increase the volume of students & new grads - increase the $ for RTs (new grads) to $18-20 and put agencies out of business	1	.1
I worked for 23 years in a large 800-bed hospital. We had 6 "technical assistants" who were trained in our hospital for their didactic & clinical instruction. They are excellent and still employed in that capacity for 20 years. A tech can be much much more productive. They are all working in diagnostic radiography.	1	.1
Id be interested in responses on q24 as I'd like to begin the practice of having tech aides and how other facilities train & utilize these positions	1	.1
Local temps are more likely to recruit your staff. [Ranked "local temp" last in q32.]	1	.1
More important than cost effectiveness: Permanent techs provide better quality care & better continuity of care. That is much more important.	1	.1
Most of our techs do not have time during their workday for workplace CEUs, and they do not want to utilize free ceu's from our institution; they always want to be sent somewhere for a class. My experience with traveling temps/local temps and recruiting firms has been poor quality techs or non-committed attitudes.	1	.1
No longer in mgmnt. After 11 years I decided to return to a front line tech position - and I'm loving it!	1	.1
Organization must consider recognizing diagn. technologist as specialist. Procedure volume requires a special and dedicated employee. All modalities are specialized in today's market. Recognizing the needs of your core staff. Adjusting pay scale to market needs and rewarding staff for performance has eliminated the need for travelers. (Travelers are a dangerous market and gaining power.) It is hard for organization to compete. Address needs now and this problem goes away.)	1	.1
Other costs in locums are airline fares, car rentals, mileage, apartments, per diem, phone (local); questionable quality of locum; JCAHO requirement; verification of credentials; locums not committed to good quality patient care; not concerned about patient satisfaction. I do not feel healthcare will be able to afford them.	1	.1
q3b, 250 employees: (Radiology)	1	.1
qs28,29: temps' pay "at least" [50% higher]	1	.1
Since i work in a small office x-ray techs are cross trained into many other positions	1	.1
Some advantages of contract travellers are the following: 1.) Minimal days off requested and virtually no vacation requests. 2.) Minimal sick days with contract employees	1	.1
Staffing levels would be greatly enhanced if schools could expand their student	1	.1

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enrollment numbers		
Techs are turning to traveling for the increased salary -- making it difficult to find perm techs. Traveling techs' salaries are +-30% over perm salaries -- making it impossible to hire perms -- especially in a resort area.	1	.1
Temps can demand too many things -- or actually, refuse to do too many things, such as take call, or work a shift they don't like. Then when the permanent staff tech sees the temp make lots of money & work only how & when they want, their morale goes way down.	1	.1
The actual pay that a temp receives per hour is about 20% higher than a perm tech but we also have to pay for car, lodging, & a meal per diem which is what cost 150% more in total than regular tech. I use AHRA stats for productivity benchmark	1	.1
The last parts of this survey do not apply to my current position	1	.1
This questionnaire was too lengthy.	1	.1
Training your own people to fill modalities has been a very cost effective measure for us. It has also improved morale & increased retention of technologists.	1	.1
Traveling costs are 3 times that of a staff technologist's. If find that if we have a "local traveler" I only save $ in housing. Still have to pay the per diem, rental car, etc. However, the dollar amount the actual tech receives is hard to know, i.e., a sonographer on staff may make $25/hr while the traveler may make $35/hr but the cost to the hospital is $75/hr.	1	.1
Traveling/temp agencies are the scourge of this profession. I dislike working in the event I have to resort to that form of employee placement. I hate the fact that they call facilities & try to recruit techs. We are fully staffed, thankfully, and when techs get those calls they forward them to me. I ask for the company/agency name, then tell the caller that their agency is low on my "hit list."		
We have a very stable staff & rarely have the need for a temp. We only use 1 traveling temp is 2 staff positions are open for hire. The traveling temp stays on 1 tx unit to limit training time while the permanent staff continues rotations to all areas	1	.1
We have been very fortunate in that we have not had a lot of need of temp techs. We have an odd weekend shift that we have been filling with local temps. I find them to be below par & very expensive.	1	.1
We have used temps only for MR & Nuc Med. Cost has varied by firm used -- more than by local vs. traveling. BUT all of them have been great!	1	.1
We need MANY more effort in promoting, supporting & enhancing NEW technologist & RETIRED tech into the market. We are fighting an uphill battle because of workload issue & dissatisfaction with team building if staffing isn't optimal.	1	.1
We need to look at the temporary staffing increase and decide how to make that position less attractive to the too few radiation therapists that exist. Temp	1	.1
While I am retired, I did try to provide responses that would have been appropriate if I were still active.	1	.1
While permanent staff resent agency staff, they've accepted need in order to have help	1	.1
Would like to see sign-on bonuses disappear as this has created a negative impact on small facilities to fill staffing needs w/high quality techs. Small practices cannot compete w/large institutions on this issue	1	.1
Total	670	100.0

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Additional Comments Written Various Places on Questionnaire

Comments are organized by the question addressed, rather than by respondent. A total of 56 (8.4%) questionnaires contained additional comments.

Bonus Comments

Responsibilities: [hiring]: Direct reports. [discipline]: Direct report.
% of time on various tasks: Dept. of one
Type of institution: next to "Educational institution": Academic practice - rad onc.
Size of institution: 1800 exams: new pts @ 4 sites. 60 employees: -- only 5 of which are RTTs.
100 exams: (x-ray dept)
103 employees: in radiology
130 exams: "yr"
17,500: Crossed out "exam", wrote in "procedures".
38 employees: Rad employees
40 employees: Civilian / Also have 25 other military personnel onsite.
40,000 exams per month: nationally
50 employees: (technologists)
55 employees: *Rad Staff
600 exams: Radiology. 130 employees: Total
exams & employees: "my area", "my employees"
exams & employees: Radiology
circled "institution", wrote in "area" [where you work].
Years as ASRT member: 3-5 years: A guess
Years as Management Chapter member: Don't remember
Member of any other management-relevant association?: state or local nanl:CSRT.
Staff access to online CE: [may count as on-job]: Although very few do.
[...doing so as on-job time]: If work load permits this luxury -- if not can be done after hours.
[**location of other computers staff can use:** The hospital training lab.
Break area.
Each employee has their own computer.
Policy with respect to non-CE use of Internet: [as long as doesn't interfere]: We do not have abuse though.
beside choice [... or serve an educational ...]: Ideal
Attitudes toward applications training: effect on morale: Undecided.
Use, training of R.T. aides: Orderly.
We call them tech assistants.
Budgeting strategy: [accurate as possible]: Based on expected volumes.
next to "accurate": by reviewing historical data.
Forecast based on new services, ventures, etc.
Benchmarking surveys: willing/able (to share)
[Yes have done benchm but no not at liberty to share]: Very limited surveys and site specific.
[Yes, have done benchmarks but No, sharing]: I am on LOA until Feb.
Under what circumstances hire temp/traveling R.T.: Only if absolutely necessary
[**Local temp vs. permanent tech salary/wages:** [local temps' total comp higher]: per case rates
Never have used
$36/hr RAD, $40/hr CT, $50/hr Nuc Med
All questions about temp vs. permanent techs: N/A; No input
Traveling temp vs. permanent tech salary/wages: 246% higher: (all inclusive rate)
[equal ave]: I doubt it anywhere.
Questions about cost-benefit ratio of temp vs. permanent: "Human Resource question"
Cost/benefit ratio of local temp vs. permanent tech: Depends on situation
No brainer! NO managers like to hire temps!
[permanent more cost effective]: None or very few available. People casting[?] for perm. Techs.
[**Cost/benefit ratio of traveling tech vs. permanent tech:** [hire pmnt mce]: More importantly, a perm tech has loyalty, interest in improving. Learning curve is gone after several months.
Lots of N/As were written in next to temp vs. permanent comparison questions.

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